

Bertil Åkesson (1928 – 2013) obituary

ARNE NYGREN¹*, THOMAS DAHLGREN², FREDRIK PLEIJEL³,
HELENA WIKLUND⁴, TOMAS CEDHAGEN⁵, CHRISTER
ERSÉUS⁶ AND MALTE ANDERSSON⁷

¹ Maritime Museum & Aquarium, Karl Johansgatan 1-3, 41459 Gothenburg, Sweden (arne.nygren@kultur.goteborg.se);

² Uni Research Miljø, Thormøhlensgt. 49 B, 5006 Bergen, Norway (thomas.dahlgren@uni.no);

³ Department of Biological and Environmental Sciences, University of Gothenburg, The Lovén Centre Tjärnö, 45296 Strömstad, Sweden (fredrik.pleijel@bioenv.gu.se);

⁴ Life Sciences Department, The Natural History Museum, Cromwell Rd, Kensington, London SW7 5BD, UK (helenawiklund@gmail.com);

⁵ Aarhus University, Department of BioScience, Ole Worms Allé 1, 8000 Aarhus C, Denmark (cedhagen@bios.au.dk);

⁶ Department of Biological and Environmental Sciences, University of Gothenburg, Box 463, 40530 Gothenburg, Sweden (christer.erseus@bioenv.gu.se);

⁷ Department of Biological and Environmental Sciences, University of Gothenburg, Box 463, 40530 Gothenburg, Sweden (malte.andersson@bioenv.gu.se)

* To whom correspondence and reprint requests should be addressed. Email: arne.nygren@kultur.goteborg.se



Bertil Åkesson (photograph from a private source).

Bertil Åkesson passed away June 25, 2013 at the age of 85, mourned by his wife Birgitta and son Bengt with family.

Bertil was born in Lund and grew up at Skabersjö Castle, where his father Alfred Åkesson worked as estate trustee. After graduating in Malmö, Bertil started his academic career at Lund University in 1948. He took his master's degree in 1951 and his doctorate in 1958 in zoology on sipunculids. Bertil married Birgitta Stendahl in 1960, also a biologist working as a teacher trainer. Bertil had a position for 12 years as Associate Professor of Zoology in Lund, but in 1970 he transferred his personal research fellowship to the University of Gothenburg, where he got closer to the marine facilities on the Swedish west coast.

As the Department of Zoology in Gothenburg grew, the broad topic of structural and ecological zoology became unmanageable to be handled by a single professor. As a professor in Zoology, Bertil Åkesson then in 1986 took over the responsibility for the ecological activity at the Department. He was also Head of Department for two periods. He retired in 1993 but continued his research at the institution for many years, publishing what became his last paper in 2011. Bertil's

long research career reflects the major changes in zoology during this epoch. Throughout the first part of his career he developed a great skill in comparative morphology and published three major studies on sipunculans. During the 1960s, he broadened his research field with embryology, mainly working with polychaetes, soon to become his central model and analysed with dedicated enthusiasm.

Bertil's influential pioneering work showed that a group of polychaete species (*Ophryotrocha*), with small body size, short generation time and resistance to a broad range of environmental conditions, was well suited for laboratory experiments. In these polychaetes, he saw great potential to analyse some of that time's central research problems, such as speciation, behaviour, mode of reproduction and life cycle strategies. Bertil's work established the group as a model organism for both basic evolutionary questions as well as an ecotoxicology model for the effects of marine pollutants. He held more than 20 species in culture in his lab, some of them continuously for 30–40 years, and he played a key role in distributing these species to laboratories all around the world.

Bertil Åkesson was well known in his field of research and he had broad international collaboration with marine research stations and universities in Europe as well as in the USA and Australia. His international contacts were beneficial to graduate students as well as younger colleagues in that he enthusiastically encouraged and arranged for their visits to foreign institutions. In Sweden Bertil contributed to the expansion of the marine field station at Tjärnö at University of Gothenburg, where he also supervised a number of PhD students. He was also active at the field station at Kristineberg, from where it is not far to Högby, where Bertil and his family have had their summer residence since 1966.

Bertil Åkesson's work at the department was dominated by research and, in the years closer to retirement, administration as Head of the Department. He was also a tutor and university teacher. In all, Bertil was factual, honest and impartial, efficient, positive, and supportive. He was gifted with much humour that helped to solve many knots, often with a merry laugh. We miss our dear colleague Bertil, his good humour, positive view on life, and irrepressible enthusiasm for science.

Bibliography

- Åkesson, B. 1958. A study of the nervous system of the Sipunculoidea. *Undersökningar över Öresund* 38: 1–249.
- Åkesson, B. 1961. A method of continuous observation of the object during vital staining with methylene blue. *Arkiv för Zoologi* 13: 321–322.
- Åkesson, B. 1961. A rapid method of orienting small and brittle objects for sectioning in definite planes. *Arkiv för Zoologi* 13: 479–482.
- Åkesson, B. 1961. On the histological differentiation of the larvae of *Pisone remota* (Pisoniidae, Polychaeta). *Acta Zoologica* 42: 177–225.
- Åkesson, B. 1961. Some observations on *Pelagosphaera* larvae. *Galathea Report* 5: 7–17.
- Åkesson, B. 1961. The development of *Golfingia elongata* Keferstein (Sipunculoidea) with some remarks on the development of neurosecretory cells in sipunculoids. *Arkiv för Zoologi* 13: 511–531.
- Åkesson, B. 1962. The embryology of *Tomopteris helgolandica* (Polychaeta). *Acta Zoologica* 43: 135–199.
- Åkesson, B. 1963. The comparative morphology and embryology of the head in scale worms (Aphroditidae, Polychaeta). *Arkiv för Zoologi* 16: 125–163.
- Åkesson, B. 1964. On the eyes of *Tomopteris helgolandica* (Tomopteridae, Polychaeta). *Acta Zoologica* 46: 179–189.
- Åkesson, B. 1967. A preliminary report on the early development of the polychaete *Tomopteris helgolandica*. *Arkiv för Zoologi* 20: 141–146.
- Åkesson, B. 1967. On the biology and larval morphology of *Ophryotrocha puerilis* Claparède & Metschnikov (Polychaeta). *Ophelia* 4: 111–119.
- Åkesson, B. 1967. On the nervous system of the *Lopadorhynchus* larva (Polychaeta). *Arkiv för Zoologi* 20: 55–78.
- Åkesson, B. 1967. Orientation and embedding of small objects in Steedman's polyester wax for sectioning in definite planes. *Arkiv för Zoologi* 19: 247–249.
- Åkesson, B. 1967. The embryology of the polychaete *Eunice kobiensis*. *Acta Zoologica* 48: 141–192.
- Åkesson, B. 1968. The ontogeny of the glycerid prostomium. *Acta Zoologica* 49: 203–217.
- Åkesson, B. 1968. The parasite-host relation between *Eucoccidium ophryotrochae* Grell and *Ophryotrocha labronica* La Greca & Bacci. *Oikos* 19: 158–163.
- Åkesson, B. 1970. *Ophryotrocha labronica* as test animal for the study of marine pollution. *Helgoländer wissenschaftliche Meeresuntersuchungen* 20: 293–303.
- Åkesson, B. 1970. Sexual conditions in a population of the polychaete *Ophryotrocha labronica* La Greca & Bacci from Naples. *Ophelia* 7: 167–176.
- Åkesson, B. 1972. Incipient reproductive isolation between geographic populations of *Ophryotrocha labronica* (Polychaeta, Dorvilleidae). *Zoologica Scripta* 1: 207–210.
- Åkesson, B. 1972. Sex determination in *Ophryotrocha labronica* (Polychaeta, Dorvilleidae). Pp. 163–172 in: Battaglia, B. (ed.), *Fifth European Marine Biology Symposium*. Piccin Editore, Padova.
- Åkesson, B. 1973. Dinophilidernas (Archiannelida) systematiska ställning. *Zoologisk Revy* 35: 76–78.
- Åkesson, B. 1973. Morphology and life history of *Ophryotrocha maculata* sp. n. (Polychaeta, Dorvilleidae). *Zoologica Scripta* 2: 141–144.
- Åkesson, B. 1973. Reproduction and larval morphology of five *Ophryotrocha* species (Polychaeta, Dorvilleidae). *Zoologica Scripta* 2: 145–155.
- Åkesson, B. 1974. Fortplantning hos en marin maskgrupp. *Svensk Naturvetenskap*, 97–106.
- Åkesson, B. 1975. Bioassay studies with polychaetes of the genus *Ophryotrocha* as test animals. Pp. 121–135 in: Koeman, J.H. and Strik, J.J. (eds.), *Sublethal effects of toxic chemicals on aquatic animals*. Elsevier, Amsterdam.
- Åkesson, B. 1975. Reproduction in the genus *Ophryotrocha* (Polychaeta, Dorvilleidae). *Pubblicazioni della Stazione Zoologica di Napoli* 39 (Supplement): 377–398.
- Åkesson, B. 1976. Morphology and life cycle of *Ophryotrocha diadema*, a new polychaete species from California. *Ophelia* 15: 23–35.
- Åkesson, B. 1976. Temperature and life cycle in *Ophryotrocha labronica* (Polychaeta, Dorvilleidae). *Ophelia* 15: 37–47.
- Åkesson, B. 1977. Crossbreeding and geographic races: Experiments with the polychaete genus *Ophryotrocha*. *Mikrofauna des Meeresbodens* 61: 11–18.
- Åkesson, B. 1977. Parasite-host relationships and phylogenetic systematics. The taxonomic position of dinophilids. *Mikrofauna des Meeresbodens* 61: 19–28.
- Åkesson, B. 1978. A new *Ophryotrocha* species of the *labronica* group (Polychaeta, Dorvilleidae) revealed in crossbreeding experiments. Pp. 573–590 in: Battaglia, B. and Beardmore, J. (eds.), *NATO Conference Series (Marine Science)*. Plenum Publishing, New York.
- Åkesson, B. 1980. The use of certain polychaetes in bioassay studies. *Rapports et Procès-verbaux des Réunions Conseil International pour l'Exploration de la Mer* 179: 315–321.
- Åkesson, B. 1982. A life table study on three genetic strains of *Ophryotrocha diadema* (Polychaeta, Dorvilleidae). *International Journal of Invertebrate Reproduction* 5: 59–69.
- Åkesson, B. 1983. Methods for assessing the effects of chemicals on reproduction in marine worms. Pp. 459–482 in: Vouk, V.B. and Sheehan, P.J. (eds.), *Methods for assessing the effects of chemicals on reproductive function*. Chichester, John Wiley.
- Åkesson, B. 1984. Speciation in the genus *Ophryotrocha* (Polychaeta, Dorvilleidae). *Fortschritte der Zoologie* 29: 299–316.
- Åkesson, B. 1994. Evolution of viviparity in the genus *Ophryotrocha* (Polychaeta, Dorvilleidae). *Mémoires du Muséum national d'Histoire naturelle. Série A, Zoologie* 162: 29–35.
- Åkesson, B. & Costlow, J.D. 1978. Effects of temperature and salinity on the life cycle of *Ophryotrocha diadema* (Polychaeta, Dorvilleidae). *Ophelia* 17: 215–229.
- Åkesson, B., and Costlow, J.D. 1992. Effects of constant and cyclic temperatures at different salinity levels on survival and reproduction in *Dinophilus gyrotilatus* (Polychaeta, Dinophilidae). *Bulletin of Marine Science* 48: 485–499.

- Åkesson, B., and Ehrenström, F. 1984. Avoidance reactions in dorvilleid polychaetes when exposed to chemical contaminated sediments. Pp. 3–12 in: Persoone, G. Jaspers, E. and Claus, C. (eds.), *Proceedings of the International Symposium on Ecotoxicological Testing for the Marine Environment, Ghent, Belgium, september 12–14, 1983, volume 2*.
- Åkesson, B., and Hendelberg, J. 1989. Nutrition and asexual reproduction in *Convolutriloba retrogemma*, an acoelous turbellarian in obligate symbiosis with algal cells. Pp 13–21 in: Ryland, J.S. and Tyler, P.A. (eds.), *Reproduction, genetics and distribution of marine organisms. 23rd European Marine Biology Symposium, School of Biological Sciences, University of Wales, Swansea, 5–9 September 1988. International Symposium Series*. Olsen and Olsen, Fredensborg, Denmark.
- Åkesson, B., and Paxton, H. 2005. Biogeography and incipient speciation in *Ophryotrocha labronica* (Polychaeta, Dorvilleidae). *Marine Biology Research* 1: 127–139.
- Åkesson, B., and Rice, S. 1992. Morphology and life cycle of two *Dorvillea* species with obligate asexual reproduction. *Zoologica Scripta* 21: 351–362.
- Åkesson, B., Gschwentner, R., Hendelberg, J., Ladurner, P., Müller, J., and Rieger, R. 2001. Fission in *Convolutriloba longifissura*: asexual reproduction in acoelous turbellarians revisited. *Acta Zoologica* 82: 231–239.
- Dahlgren, T.G., Åkesson, B., Schander, C., Halanych, K.M., and Sundberg, P. 2001. Molecular phylogeny of the model annelid *Ophryotrocha*. *Biological Bulletin* 201: 193–203.
- Heggøy, K.K., Schander, C., and Åkesson, B. 2007. The phylogeny of the annelid genus *Ophryotrocha* (Dorvilleidae). *Marine Biology Research* 3: 412–420.
- Hendelberg, J., and Åkesson, B. 1988. *Convolutriloba retrogemma* gen. et sp. n., a turbellarian (Acoela, Platyhelminthes) with reversed polarity of reproductive buds. *Fortschritte der Zoologie* 36: 321–327.
- Hendelberg, J., and Åkesson, B. 1991. Studies of the budding process in *Convolutriloba retrogemma* (Acoela, Platyhelminthes). *Hydrobiologia* 227: 11–17.
- Nilsson Sköld, H., Obst, M., Sköld, M., and Åkesson, B. 2009. Stem cells in asexual reproduction of marine invertebrates. Pp. 105–137 in: Rinkevich, B. and Matranga, V. (eds.), *Stem cells in marine organisms*. Springer Science, Business Media.
- Ockelmann, K., and Åkesson, B. 1990. *Ophryotrocha socialis*, n.sp., a link between two groups of simultaneous hermaphrodites within the genus (Polychaeta, Dorvilleidae). *Ophelia* 31: 145–162.
- Paavo, B., Bailey-Brock J.H., and Åkesson B. 2000. Morphology and life history of *Ophryotrocha adherens* sp. nov. (Polychaeta, Dorvilleidae). *Sarsia* 85: 251–264.
- Paxton, H., and Åkesson, B. 2007. Redescription of *Ophryotrocha puerilis* and *O. labronica* (Annelida, Dorvilleidae). *Marine Biology Research* 3: 3–19.
- Paxton, H., and Åkesson, B. 2010. The *Ophryotrocha labronica* group (Annelida: Dorvilleidae), with the description of seven new species. *Zootaxa* 2713: 1–24.
- Paxton, H., and Åkesson, B. 2011. The *Ophryotrocha diadema* group (Annelida: Dorvilleidae), with the description of two new species. *Zootaxa* 3092: 43–59.