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OBITUARY

TARVO ANOPOIKA OKSALA

A short biography of Dr T. Oksala (born: Feb. 24, 1915, Jyväskylä, Finland; deceased Nov. 3, 1982, same place. Emeritus Professor of Genetics, University of Turku) is followed by his odonatological bibliography (1938-1952).

On November 3, 1982 Professor Tarvo Oksala died in his home town Jyväskylä at the age of 67 years. Long illness ended the life of a well known geneticist whose early works on the cytogenetics of dragonflies were pioneering in the 1940's.

TARVO ANOPOIKA OKSALA was born in Jyväskylä, Finland on February 24, 1915 into a family with strong cultural background and future. Already as a school boy he decided to become a geneticist. So, in 1933 he enrolled in the University of Helsinki for studies on biological sciences. He received a Master's degree in 1939 and a Doctor's degree four years later, although military service in 1940-42 had delayed his studies.

Tarvo Oksala began his scientific work on the Odonata under advice of his teacher, HARRY FEDERLEY, Professor of Genetics, who himself was author of an early paper (1908) on dragonfly migrations. Quite soon, however, Oksala became independent and found his own field of research in cytogenetics of the Odonata. During 1939-1952, he published several articles concerning meiotic behaviour of chromosomes in about 40 species of Finnish Odonata. During this period, the biochemistry of meiosis was still totally unknown, and the theory of meiosis was based on exact cytological and cytogenetical observations on the meiosis of different organisms.

In his studies Oksala found that in male and female meiosis of Odonata the reduction of the chromosome number takes place during the second meiotic division (postreduction). This is quite remarkable, as in most animals and plants meiosis is prereductional. The cellular events which separate the mitotic and meiotic chromosome behaviour received great attention in Oksalas investigations,

and he was one of the persons who further developed the precocity theory after its foundation had been laid by C.D. DARLINGTON. The main idea in Oksala's theoretical developments was thus stated by him: *"Precocity... does not develop suddenly during the meiosis, at least not in the Odonata, but begins already in the latest pre-meiotic mitoses, growing stronger in proportion to the approach of the meiosis. These facts support the view that precocity really is a causal factor contributing to the development of meiotic phenomena"*. Some of the philosophical considerations of the precocity theory have got a practical explanation through the recent results of the investigations into the biochemistry of meiosis. The genetic information for the meiotic events appears to be preprogrammed on the scheduled activation of a relatively small number of genes coding for enzymes and other products necessary for the meiotic phenomena.

Fig 2. Tarvo Oksala, ready for dragonfly collecting in front of the summer house of another odonatologist, Lauri Tiensuu (1913-1980) in Sortavala near Lake Ladoga (July 5, 1938). (Photo: L. Tiensuu).

In addition to problems of the precocity theory, Oksala studied also meiotic chiasma interference and meiotic and mitotic chromosome numbers of several species of the Odonata. After the appearance of his last publication on the Odonata in 1952, Oksala extended his interests to the meiotic cytology of other insects and plants, on the genetics of red fox and on the cytology of cancer. The last period of Oksala's scientific work concerned with meiosis and genetics of *Drosophila*.

Although dragonflies were just mere tools for his genetical research, Oksala also wrote two faunistic papers on them, based on the material gathered at his collecting trips.

Oksala had studied genetics in Edinburgh and in London in 1947-1948 and again in 1951 and further in Cold Spring Harbor and in Eugene in 1958-1959. He also visited and lectured in several other universities and institutes in USA and Europe and has attended international congresses. He was invited to give a lecture on the meiosis of *Drosophila* at the Cold Spring Harbor Symposium on

Quantitative Biology in 1958.

In 1960 he was appointed the first Professor of Genetics at the University of Turku, which chair he held until retirement in 1978. Already in 1945 he had been appointed Lecturer of Genetics at the University of Helsinki. Tarvo Oksala was active in scientific societies and he has held several administrative offices in the University and in national scientific organizations. To mention only a few, he has been Dean of the Faculty of Sciences, Member of the State Board for Natural Sciences and President of the Board of the Finnish Game and Fisheries Research Institute.

Tarvo Oksala was a skillful teacher and a wise educator, who was highly esteemed and warmly liked by his students. He never married — he lived from science and for science.

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Portrait on p. 397 dated 1960 approx

M.HÄMÄLÄINEN[1] and L. HALKKA[2]

[1] Department of Agricultural and Forest Zoology
University of Helsinki
Viikki
SF-00710 Helsinki 71, Finland

[2] Department of Genetics
University of Helsinki
Pohj. Rautatiekatu 13
SF-00100 Helsinki 10, Finland