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SOME UNUSUAL MITOTIC AND MEIOTIC STAGES IN ASCARIS MEGALOCEPHALA BIVALENS*

(Abstract)

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Usual stages in Ascaris eggs were found in the maturation divisions and in the early embryonic divisions. Supernumerary dyads and tatrads were found in meiotic divisions and some evidence for fiber attachment between non-homologous chromosomes seen. Statistical observation on supernumerary chromosomes in embyronic divisions revealed a high non-disjunction rate as well as frequent fragmentation. Chromosomal sheaths were noted in several instances where fragmentation was inferred by comparative chromosome lengths.

Terminal non-disjunction followed by chromosomal vacuolisation was found first, second and third mitotic divisions. Vacuolisation began at the region of the plate and extended to the poles; polar vacuolisation revealed the sheaths about all four chromosomes to be continuous, forming an "endless" band, twice folded at the poles. This sheath was broken down only at cell membrane formation and the elongated vacuolised chromosomes were recognized as "chromosomal vesicles."

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