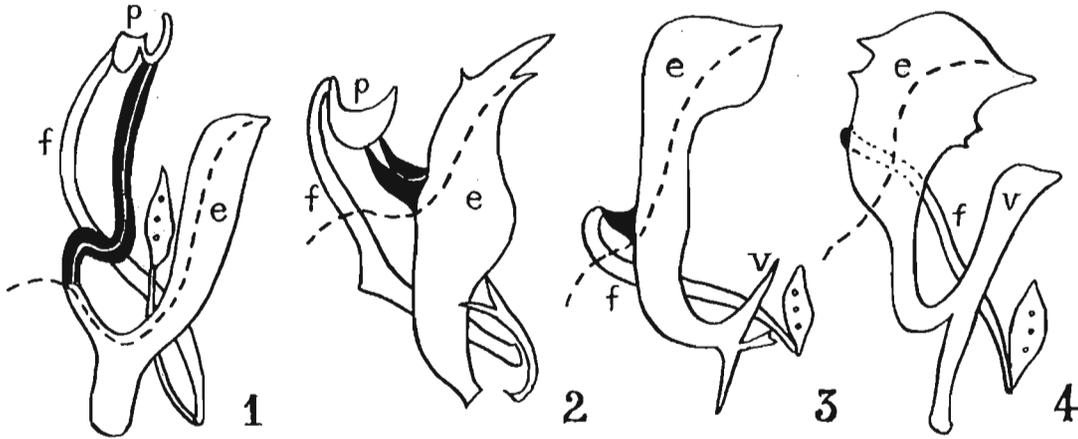


Okada, Toyohi. Tokyo Metropolitan University, Tokyo, Japan. Homology in the components of the phallic organs of *Leucophenga* and *Microdrosophila*.

The genera *Leucophenga* and *Microdrosophila* show close resemblance to each other in their U-shaped elements of phallic organs (compare figs. 1 and 4), which is found, however, to be merely superficial. Misinterpretation (Okada, 1966, *Bul. Brit. Mus.*

NH, Suppl. 6:121) was caused by the treatment of cleared material. The true homology can be established basing on the innervation of ejaculatory duct (shown by broken lines in figures) into aedeagus (e), which is traceable in fresh and non-cleared material. The aedeagus corresponds to the ventral arm of the U-shaped elements in *Leucophenga* (e.g., *nigroscutellata* Duda, fig. 1), while it corresponds to the dorsal arm in *Microdrosophila* (figs. 3, 4). The ventral arm in *Leucophenga* (shaded black in figures), which had been mistaken as aedeagus, is paired, elongated and connected to ventral fragma (f: left half obliterated) by means of unpaired posterior parameres (p). This paired structure shows gradual reduction in size in *Microdrosophila* species. It is still paired and large in *M. maculata* Okada (fig. 2), unpaired and smaller in *M. purpurata* Okada (fig. 3), while it becomes vestigial in *M. nigrohalterata* Okada (fig. 4) with the aedeagus attached nearly directly to the ventral fragma. Furthermore, it is observed that in *Microdrosophila* the ventral process (v = ventral arm) tends to develop in compensation to the reduction of the paired structure in question and parallel to the development of aedeagus (compare figs. 2, 3, and 4).



Figs. 1~4. Phallic organs of *Leucophenga* (1) and *Microdrosophila* (2~4), sinistral aspects. For explanation see the text.

Gersh, Eileen S. University of Pennsylvania, Philadelphia, Pennsylvania. Chromatid asynapsis in salivary gland nuclei.

The accompanying photos were made from a single slide from a rst^2/yw larva. While Figure A suggests a triploid condition with partial asynapsis of one of the chromosomes, Figure B clearly illustrates quadripartite structure in both the re-

gions shown. It is probable, therefore, that these are all examples of chromatid asynapsis, with Figure A showing a 3-1 separation of strands.

Similar conditions were found in a few other nuclei. Such nuclei appeared to have in common a higher degree of polyteny than others (in the same pair of glands) in which pairing was complete or in which, if asynapsis occurred, it was as usual, between two chromosomes.