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Methods for the Study of Living *Glomeris* Embryos

by

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Individuals of both sexes of *Glomeris* sp. are kept together at 25° C in plastic boxes (ca. 8 ♂ and ca. 8 ♀ per box) with sieved litter and fragments of wood. A few drops of water are added every 1 - 2 days to maintain the right humidity.

In Spring and Summer, freshly collected females lay eggs for about 3 weeks (50 to 100 eggs per day in each box). Renewal of the litter stimulates resumption of oviposition. Each egg is protected by an earthy capsule; most eggs are produced during the night.

The eggs are collected each day and put into hollow plastic stoppers (Ø 15 mm) under a cover of litter and pellets to keep them at the right humidity. Other methods aimed at maintainance of humidity have been discarded because of the development of moulds. The stoppers are ranged in boxes stored in an incubator at 25° C.

Living embryos can be examined directly on the litter, after careful removal of the earthy capsule; but they can be best examined if placed on a slide with a depression and observed unter the microscope.

Considerable problems derive from the opacity of the chorion. This can be removed mechanically or by immersing the eggs in a few drops of bleach solution for 2 - 5 min. The latter operation should be done carried out only on embryos with a blastoderm cuticle unter the chorion, i.e. 4 - 5 days old, otherwise ther contents are lost. However, the best method is to render the chorion transparent by covering the eggs with a halocarboil oil (e.g. Voltalev), such as that used for studying *Drosophila* (WIESCHAUS & NÜSSLEIN-VOLHARD 1986).

It is advisable to use a coverslide and to store the living preparation in a small well-closed plastic box whose walls are lined with water-soaked cottonwool to maintain the humidity.

The development of the embryos can be recorded on a videotape using a camera operated unter cold light, possibly with a "date/time generator" which records the time directly on the tape during filming of the embryos. A videotape illustrating some developmental stages of *Glomeris* was shown at the Congress.

Literature:

WIESCHAUS, E. & C. NÜSSLEIN-VOLHARD (1986): Looking at embryos. – In ROBERTS, D.B. (ed.): *Drosophila*, a practical approach. IRL Press, Osford – Washington: 199 - 227.