

## Coelomocytes of the Urchin *Lytechinus Pictus* (Verrill) (Echinoidea)

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### ABSTRACT

Coelomocytes of several species of echinoderms have been described, quantified and photographed (e.g., Kindred Biol. Bull. 46:228-251, 1924; Boolootian and Giese Biol. Bull. 115:53-63, 1958; Boolootian am. Zoologist, 2:275-284, 1962; Jones, G.M., Hebda, A.J., Scheibling, R.E., and Miller, R.J., J. invertebrate. Pathol. 45:260-271, 1985), with the exception of the regular urchin *Lytechinus pictus*. The white urchin *L. pictus* were collected at 60 meters depth off of Malibu, California using an otter trawl. Live, healthy specimens were transported to the laboratory and kept in aerated aquaria at 15 °C for 2 hours before sampling coelomic fluid.

Semipermanent slides of coelocytes were made by withdrawing approximately 0.2cc of fluid using a 1cc glass syringe and a #22 needle coated on the inside with SGMACOTE siliconizing agent and quickly placing the fluid on a siliconized glass slide (Jacques, B., Fidler, E., Feldsted, E.T. and MacDonald, A.E., Canad. Med. Assoc. J. 55:26-31, 1946). The coelomocytes were fixed using a modification of the formalin-vapor technique described by Leibman (Biol. Bull. 98:46-59, 1945) where we modified it by inverting the slide and placing it on supports in the petri dish to keep the fixed cells from settling onto the siliconized glass slide. After fixing for 20 minutes the slide was removed, righted and a siliconized glass coverslip placed over the drop tacked down with clear fingernail polish and sealed again after 24hrs. Cell types and proportions were determined by making random transects with the micrometer scale across the slide and counting the first 10 cells the micrometer scale came in contact with. Twenty transects were counted for a total of 200 cells counted from 22 individual urchins of sizes ranging from 9.6 to 18mm test length. The fixed cells on the slides were checked against fresh coelomic fluid and no differences in morphology were seen. The terminology for the cell types is from Endean (In "Physiology of Echinodermata". (Richard A. Boolootian ed.). pp. 301-328, Interscience publishers 1966).

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