Cytochalasin B concentrations of 0.08 μg/ml were effective in reducing the contractile tension without making eggs unmanageable. The average tension exerted in that concentration was 0.7×10^{-3} dyne, but within that group of measurements furrows exerting as little as 0.2×10^{-3} dyne completed cleavage when the needles were removed. Concentrations of Cytochalasin B that reduced furrow tension also appeared to increase the time necessary for cytokinesis, but a careful analysis of the effect was not carried out. Although cleavage took place in concentrations of Cytochalasin B slightly greater than 0.08 μg/ml, the stickiness of the egg surface prevented satisfactory measurement of the tensions exerted.

These results suggest that the force necessary to divide sand dollar eggs may be less than 0.2×10^{-3} dyne. However, it is possible that the treatment altered the resistance to deformation of the non-furrow surface, which might have affected the force necessary for division. This investigation was supported by Grant #PCM 74-18380 A02 from the National Science Foundation.

SPAWNING SEASON OF THE GREEN URCHIN, *Strongylocentrotus drobachiensis*

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E. B. Harvey reported in The American Arbacia and Other Sea Urchins (p. 59, Princeton University Press, 1956) that *S. drobachiensis* at Mt. Desert Island Biological Laboratory is ripe in March and April, and is spent by May 15th, although some males have ripe sperm beyond that date.

Animals were tested for ripeness from May 5th to July 5th, and functional gametes were obtained until the end of June. When the animals are at the peak of ripeness (March -April), gametes may be obtained by injection of 1 ml or less of 0.5 M KCl. To obtain the gametes at the end of the spawning season, we removed the jaw mechanism, the viscera and coelomic fluid, leaving only the gonads. The urchin was then inverted over a beaker of sea water and 0.5 M KCl (usually about 5-10 ml) was poured into the coelomic cavity.

The proportion of ripe animals and amount of eggs and sperm obtained from each ripe animal declined as the season progressed. However, as late as June 27th, a female produced about 35 ml of unpacked eggs, which fertilized well and subsequently divided normally. Urchins which were held in sea water tanks and fed generously with *Ascophyllum* performed better than animals which were collected and used directly from Frenchman's Bay in late June, even though there was no lack of seaweed in the natural habitat. R. Hinegardner (Czihal, The Sea Urchin Embryo, pp. 11-12, Springer-Verlag, 1975) found that gamete production in captive *Lytechinus pictus* seems to depend on availability of food, and that unripe urchins ripen and produce gametes if well fed.

Satisfactory cleavage and subsequent development took place between 9°-12.5° C, with time of 1st cleavage 120-130 minutes after fertilization. Times of one hour from list to 2nd cleavage, and one hour from 2nd to 3rd cleavage were average. By July 5th, animals failed to release significant quantities of gametes after stimulation.

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