

extruding its eggs. I also tried Atlantic oyster eggs with Pacific oyster sperms, as well as Atlantic oyster sperms with Pacific oyster eggs, but without success, as one might suppose. I put eggs, embryos and larvæ of both species together under the same coverslip for comparison—those of the small British Columbia oyster looking like giants beside those of the large Prince Edward Island oyster. This is a curious phenomenon which I have several times observed on other species, *e. g.*, the very large eggs of *Astarte* compared with the small eggs of large species like *Macra*.

For the study of segmentation, etc., the Atlantic species is of advantage on account of smaller size and greater transparency. The order of segmentation appears to be the same in both—both subject to variations such that it would require a great number of painstaking observations to decide exactly what is the normal mode in good healthy eggs. I have, on both sides of this continent, spent considerable time in trying to determine the order of segmentation, the cell-lineage, the planes of cleavage, the succession of nuclei, the effect of gravitation, the constant and continuous orientation of successive stages, the origin of the shell-gland and the mode of formation of the shell, etc., but can not discuss such subjects here. I may briefly state, however, that I believe Brooks failed to observe the shell-gland, in his original work, and at one particular stage mistook the relation of the shell-valves to the blastopore which made it necessary to reverse his orientation of the embryo—hence his use of the terms dorsal and ventral are misleading. The polar bodies are dorsal at first—later, if they persist, they may become displaced anteriorly. The blastopore is ventral, the velum anterior, the shell-gland dorsal, the mouth ventral. There is no foot, nor rudiment of it, in pre-conchiferous stages.

I have found conchiferous young of the British Columbia oyster retained within the parent's shell until their own minute shells were .138 mm. in length. I believe