

Stage 3 Segmenting Egg

2 Days, Morula

 Horizon II/b
 Segmenting egg

After 52–53 hours the embryos are composed of 2 to 16 cells. This difference in degree of development must have existed in the previous stage, and is probably a result of different fertilization times.

The *blastomeres* are of unequal size, and some are dividing mitotically. The cytoplasm is finely granulated throughout and the nuclei are rather small. On the other hand, nucleoli enlarge considerably, and their number decreases. In the two-celled egg, 4 or 5 small nucleoli are visible in each cell. In the 4-celled stage, there are only 2 or 3.

A *segmentation cavity* is not yet visible. At the 8-celled stage, the contours of the blastomeres of fresh specimens are no more distinctly visible (stage of compaction): the cells attach close together.

The *diameter of the morulae* after Bouin fixation is 70 microns (KT 845), including the shrunken *zona pellucida*. The eggs are still in clusters. They have advanced to the lower half of the oviduct.

The *polocytes* are still present, even in the 16-celled morulae. Their nuclei appear pycnotic.

Corpora lutea measure 700–750 microns. The central cavity is filled by connective tissue and contains little blood and fibrin. Rarely leukocytes are encountered (Fig. 15).

Spermatozoa are no longer visible in the uterus or the oviduct.

Material	Age	Eggs
KT 846	52 h	1 one-celled and 3 four-celled eggs
KT 845	53 h	4 six-celled, 1 nine-celled, and 1 sixteen-celled egg

Figs. 13–17: Cleavage, 53 h

FIG. 13. Corpus luteum, overall picture. Bouin, H.-E.

Drawing (*right*) shows location of eggs in oviduct.

KT 845. 125:1

FIG. 14. Detail of Fig. 13, showing the connective tissue organization of the central region. 360:1

FIG. 15. Detail of the adjacent section.

Arrow indicates leukocytes appearing in connection with the central reorganization. 720:1

FIG. 16. Segmenting egg of 9 cells, with polar body, *P*, in oviduct. Bouin, H.-E.

KT 845. 270:1

FIG. 17. Segmenting egg of 9 cells, median section.

Zona pellucida extremely thin (fixation effect).

KT 845. 760:1

