divides symmetrically, always (*Discoœclis*?), or occasionally (*Leptoplana*). This cell is probably to be regarded as the prototype of the second somatoblast of annelids and mollusks, which divides symmetrically to form the 'primary mesoblasts,' the mesoblast bands (ento-mesoblast) being a new formation and the ecto-mesoblast ('larval mesenchyme,' etc.) being homologous with the mesoblast of the polyclades. This interpretation is sustained by the fact that the posterior cell of the fourth quartet may contain entoblastic elements largely developed (*Crepidula*), considerably reduced (*Nereis*) or reduced to a pair of rudimentary or vestigial cells (*Aricia, Spio*). The latter strikingly illustrate ancestral reminiscence in cell-lineage, and represent the penultimate stage in a series which begins with the polyclade. These facts and others were urged in support of the cell theory of develment and the value of cell-lineage in the investigation of homologies.

The Characters and Phylogeny of the Amblypoda. H. F. Osborn.

As a result of the recent explorations by the American Museum of Natural History, a complete skeleton of *Coryphodon* has been procured and mounted, as well as a nearly complete skeleton of *Pantolambda*, not only one of the oldest geological, but the most archaic type of ungulate, from a morphological standpoint, hitherto discovered. The restoration of this animal shows it was completely plantigrade, progressing upon the plantar and palmar surfaces of the feet, like a bear. There is an os-centrale carpi as in the *Creodonta*, and the whole skeleton, is strongly impressed with the Creodont type, reinforcing the evidence already derived from the Phenacodontidæ, that the Ungulata sprang from Unguiculate animals. This restoration agrees with a prior restoration of *Periptychus*, and the resemblances between these two skeletons are very marked, supporting the author's views expressed in 1893, that *Periptychus* should be placed among the Amblypoda. This gives this very ancient order of ungulates a very wide functional variation from small arboreal types to the huge *Uintatheres* of the Eocene. The evolution of the skull can now be fully traced out, and in *Coryphodon* we observe the rudiments of the frontal and parietal horns of *Uintatherium*.

A Series of Specimens Illustrating the Development of the Chick. Mrs. S. P. Gage.

These illustrate Professor Gage's idea that in an embryological series for a museum all stages sufficiently different to be easily recognized by the naked eye are to be included, to the adult condition. They are the unincubated germ, the 12, 18, 24, 36, 48, 60, 72 and 96-hour chick; and from this point on to hatching are at intervals of one day, ending with a chick just emerging from the shell at the 21st day. Mounted skins of chicks 24 hours and six days after hatching, of one in the stage known commercially as a broiler and of a hen and rooster complete the series.

All the specimens were fixed in 10 per cent. nitric acid, washed to free from yolk and preserved in alcohol. From the 7th day on, the membranes were too extensive to show both them and the chick, and parallel series were arranged in the same jar, one to exhibit the chick and one the membranes.

The earlier stages were mounted on cover glasses, which had been albumenized and built up in a slightly convex form with collodion and brushed with a coating of collodion containing lamp black. The germ was floated on to the cover under alcohol and fixed in place by thin collodion. Glass strips to fit the jars were prepared by albumenizing and (unless the glass were black) coating with thin collodion containing lamp black, thus giving a strongly con-