developed in a very large class of animals, and it is not quite certain but that all animals conform to this type in the development of their spermatozoa. Lankester has, for example, cited the manner of development of the spermatozoon in the earthworm (Lumbricus). as described some years ago by Bloomfield (4).* Here one has only to glance hastily at Bloomfield's figures, a few of which are reproduced, figs. 4 A. B. C. D., to see how close is the resemblance in the two cases. (Compar figure 4 D. with figure 3, which represents the corresponding stage in the case of the malaria parasite.) In the case of the earthworm we get the division of the mother sperm cell (fig. A), into a number of cells, which become arranged around a central residual mass or "blastophore" (fig. 4 C and D), as he calls it, from which they become free and swim about as active and independent units, similar to the manner in which the malarial blasts become free from the central residual masses of their meres or blastophores. But of course, in the case of the malarial parasite, we have this distinction, that these blasts, although resembling spermatozoa in the form and manner of their development, do not serve the purpose of fertilising an ovum as the spermatozoa of the carthworm do, but directly continue the life of the species, in a fresh host. Throughout the range of the animal kingdom, and the vegetable kingdom also for that matter, this is the first example which we have of the perpetuation of the race by means of a cell, which in shape and manner of development is a microgamete or male element. We are accustomed to find the product of the fertilised cell resembling in every case the macrogamete or ovum, in this respect the malarial cell and its allies form an evident exception to the rule. For these cells, or blasts, Lankester has proposed the name of "andromorphous" or "spermatomorphous" blasts or cells, in contradistinction to the ordinary "öomorphous" or "gynæcomorphous" blasts or cells of the tissue forming plants and animals. "We are certainly accustomed," states Lankester, "to associate the phenomenon of non-sexual reproduction in the higher animals with the production of öomorphous cells. It is only an egg cell which is capable of multiplication and the production of new individuals of the species, without conjunction with a fertilising cell (parthenogenesis). There are no cases on record, at any rate among animals, of parthenogenesis by means of male cells or male Speculation and experiment have both been brought to individuals. bear on the question as to whether an andromorphous cell (a spermatozoon) can be made to develop a new individual if supplied with a cell body without the addition of the nuclear matter of an öomorphous cell.

^{*} See also Calkins' "Spermatogenesis of Lumbricus." Jour. Morph., vol., XI., p. 271. 1895.