

PREFACE

The following discussion of the problems of fertilization is an outgrowth of the writer's own studies in this field. It is an attempt to present the actual status of the various problems in a critical but not in an exhaustive manner, and is thus to be regarded as a point of departure for future work as much as a brief summary of attained results. The necessary limits of the volume have imposed restrictions which have permitted scant justice to numerous excellent pieces of work with which all special students are familiar; for this the absence of textbook intention and style may perhaps be additional excuse. The part of the subject that deals with the basis of biparental inheritance is purposely treated more summarily than other problems, because so much that is really extraneous to the problem of fertilization proper is involved in the discussion.

The inevitable conflict between the strictly biological and the physicochemical methods of analysis of biological problems emerges in typical form in the problems of fertilization. It is the writer's opinion that it will long continue to exist, but that there is an ultimate reconciliation, if not in sight, at least in prospect, on logical grounds. An equal hospitality to the results of both methods of inquiry is therefore adopted. The tendency toward excessive simplification of the physicochemical school is constantly being checked by the biological school, and the conservatism of the latter has been more than once rudely shaken by the former. These mutual

assaults suggest co-operation such as is carried out at the Marine Biological Laboratory of Woods Hole. A large share of recent work on the subject has as a matter of fact been done in this institution, including the writer's own work and that of numerous other authors cited below.

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