published elsewhere. Instead, they serve as introductions to the authors' work and as springboards for discussion.

The papers fall fairly clearly into two groups. Four deal with the elusive inferences possible from tropical field studies. P. Charles-Dominique records probable seasonal breeding in *Perodicticus potto* in Gabon; *Arctocebus* (the golden potto) in the same area may give birth at any time of year. Arlette Petter discusses Madagascar lemurs. She concludes that, although the months of mating and birth differ in each genus, nearly all the young are weaned during the wet season when there is abundant food. G. Dubost attempts to relate birth peaks in the chevrotain, *Hyemoschus aquaticus*, and Elizabeth Pagès the birth peaks of pangolins, to the complex twice-yearly rains and fruiting times of the Gabon jungle. All these papers have in common the difficulty of obtaining data on the animals themselves, either their birth seasons or their ecology.

The other groups of papers deal with reproductive physiology in European mammals. P. Delost speaks from a lifetime's work on rodent reproduction, particularly on the quiescent period when the reproductive tract may partially regress. The degree and time of regression differs between species, between populations in different regions of France, and even within a population from year to year, as does the length of gestation. Mme. L. Martinet discusses the growth rate and longevity of *Microtus arvalis*: voles born in the spring grow rapidly and reproduce and die in the same summer, whereas those born in the fall grow slowly and overwinter before reproducing. Canivenc *et al.* deal with delayed implantation in mustelids, particularly the European badger, which mates during a postpartum oestrus, then keeps the blastocyst free about 300 days before implantation—its total pregnancy therefore lasts very nearly one year! M. Herlant treats the role of the hypothalamus in delayed ovulation in *Myotis* bats, and A. Peyre the peculiar cysts which form in the ovotestis of the mole and the desman (*Galemys pyrenaicus*).

The discussions are fun—revealing, perhaps even dangerously revealing, of personal quirks. They are, at times, factually misleading, as when Canivenc remarks that lemurs in Madagascar (at 13 to 25 degrees below the equator!) are little exposed to changes in day length, or when Grassé says that female primates of low dominance status may be slow to be impregnated (a view not confirmed by any primate study). However, such discussions are not published to convey information, but to give the flavor and excitement of a meeting of specialists.

In summary, this book, like too many symposia, has some new and important information among much, particularly in discussions, that is thin or even professionally useless. As a book it is perhaps most interesting for enabling non-French readers, who may know few of the participants, so quickly to pick up the feel of research in France.

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## A Topic in Virology

**Interferon.** J. VILČEK. Springer-Verlag, New York, 1969. iv + 142 pp. $10.50. Virology Monographs, vol. 6.

This review of interferon is comprehensive, but not encyclopedic. If it attempted to be the latter, it would represent duplication of effort in a very popular area of literary endeavor.

What should one expect in a work of this type? To be useful, it must be timely; it must be fairly complete; and finally, from a work by a single author one expects readability and balance of judgment, qualities so rarely found in multiauthored compendia.

This book discusses literature published up to 1968. It is at most one year out of date, which is acceptable in a review of this size. It includes the important recent developments, such as the discovery of the double-stranded RNA inducers by the Merck group. It reflects the uncertainty of knowledge regarding the mechanism of action of interferon, about which we thought we knew more in 1966 than we do now. The author still diagrams the Marcus-Salb model in great detail, although there is scant positive evidence to support it. He does not mention the work by H. Levy and his co-workers at the National Institutes of Health showing that synthetic double-stranded RNA inhibits tumor growth in the animal. But this finding is so recent and unevaluated that perhaps it is just as well it has escaped review at this time. One actually does not know whether this effect has anything to do with interferon.

The coverage of the major subjects in the field of interferon is fairly complete. These include the assay, induction and synthesis, purification, and mechanism of action of interferon. There is relatively little on the effect of interferon in man or its prospects as an antiviral agent. These matters are so speculative, however, that the author may have been wise not to spend too much time on them.

On the whole, the mass of data is reviewed in a brief, precise, usually impartial, and yet interesting way. The language flows easily, and the book is at times even entertaining, which is remarkable for literature of this type. The bibliography is in alphabetic order by authors, and full references are given. This is useful for those who wish to have a handy compilation of the literature. There is no subject index, which may be construed as a deficiency. Nor is there an author index, so the innumerable experts in the field will not be able to look up the number of times they have been quoted.

I find this to be a useful book at this particular time for graduate students, teachers, and researchers in virology.

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## Phylogeny of Some Insects

**Evolutionary Trends in Heteroptera.** Part 1, Eggs, Architecture of the Shell, Gross Embryology and Eclosion. R. H. COBBEN. Centre for Agricultural Publications and Documentation, Wageningen, The Netherlands, 1968. viii + 476 pp., illus. Dfl. 55. Laboratorium voor Entomologie, Wageningen, Mededeling No. 151. Also published as Agricultural Research Reports, No. 707.

Starting as an intensive investigation of eggs and their development and observations on the egg-laying habits of the shore bugs (Saldidae), the study on which this book is based expanded to include about 350 species "representing almost all families of Heteroptera." The results are presented in a 240-page, family-by-family description of details of the enclosing egg layers and some gross morphology of certain species in each family.

The effort to "trace separately the evolution of each egg-character" (pp. 250–349) of necessity continues the