ognized characteristics. Four genetic linkage groups are recognized.

The extensive presentation on psychogenetics demonstrates that interest in the genetics of the rat has centered largely on its learning abilities and emotional characteristics; 32 pages are devoted to emotionality, 61 to cognitive ability. In these areas Robinson has if anything over-reported early noncritical work, but has also done an excellent job of bringing the reader up-to-date on recent experiments.

The book suffers from a prolix style; one suspects it could have been 100 to 150 pages shorter. Interpretation of many studies—for example, those on tumorigenesis and tissue transplantation—show deficiencies in the author's familiarity with general principles established through work on other species. Nevertheless, the reader who brings to this book his own specialized analytic capacity will find here a source of extremely useful information, clear summaries of experimental protocol, and considerable common-sense deduction. It is a valuable reference work for all workers concerned either with the laboratory rat or with mammalian genetics.

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Entomology

The Humicolous Fauna of South Africa: Pselaphidae and Catopidae (Coleoptera) [*Memoir 15*, Transvaal Museum, Pretoria, South Africa, 1964. 261 pp.], by R. Jeannel, is a taxonomic treatise on two families of beetles that primarily inhabit the humus of the forest floors of South Africa. Ten new genera and 104 new species in the Pselaphidae and two new genera and 12 new species in the Catopidae are described. Where necessary all new genera and species are integrated in keys. The monograph is copiously illustrated; of especial value are the figures of aedeagei. The work should prove to be indispensable for those who are studying these families in the area covered. Of great service to such workers are the redescription and illustration of species briefly described by other entomologists many years ago.

Many of the collections suggest that quite a few species are altitude-dependent. Where distribution is discussed, Jeannel has incorporated the data on taxa into a web of southern dispersal routes. According to Jeannel, the faunas of Africa and Madagascar were once in a connected part of Gondwanaland in the Secondary, and various stocks reached austral Africa from South America by a South Atlantic land bridge in the Tertiary. This bridge, according to the author, could have been part of a large Paleoantarctic continent which incorporated Australia, New Zealand, austral Africa, and austral South America.

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Botany

Underlying the extension of geographical range for any species is some means of dispersal. It is fortunate for the biological world that C. T. Ingold has been so keenly interested in the varied mechanisms of dispersal displayed by fungi and bryophytes. His concern has culminated in this recently published, scholarly, and extremely readable volume, **Spore Liberation** (Oxford University Press, New York, 1965. 220 pp., $5.60).

The treatment is based on the premise that fixed organisms must rely on detachable units for dispersal and that essentially nearly all spores are dispersive units. The discussion is divided into eight sections: seven devoted to fungi and one to bryophytes. Neither subject represents a revision of earlier publications by the author. Each is an up-to-date presentation, well documented by references, and the author frequently calls attention to areas that need more investigation.

Ingold's discussion begins with a general account of fungus spores, the role of size, general principles of air transport, and the relation of shape to dispersal. Water-relations in terrestrial fungi and rhythms of spore liberation are treated in separate sections. From general aspects of fungus spore liberation, the author proceeds to the particular. The Mucorales, Sordaria, the toadstools (*sic*), and the Gasteromycetes are given individual consideration. Structurally similar forms may have quite different liberation patterns, as Ingold illustrates strikingly in the case of the Mucorales. In the discussion of the toadstools it is heartening to see basidia illustrated in their proper position. In considering the means by which basidiospores of the ballistospore type are released, Ingold mentions a theory recently proposed by L. S. Olive. A mention of D. B. O. Saville's subsequent extension of this theory might have been appropriate because no single theory seems satisfactory as an explanation of this phenomenon. Ingold sees the structural development and spore liberation patterns of the Gasteromycetes as ecological adaptations to climate. Among their five types of spore release, one, the splash-cup method, is unique among fungi, although it occurs in a lichen, several bryophytes, and angiosperms. It was first described by G. W. Martin in 1927. Later it was studied in elaborate detail by A. H. R. Buller and H. J. Brodie, as Ingold relates.

In the final discussion on bryophytes, Ingold points out mechanisms common to them and some fungi. He concludes the discussion with a comparison of the display of brightly colored tissues in a coprophilous moss and a Gasteromycete, which is suggestive of entomophily in higher plants.

In sum, this book is impressive for breadth of material and careful detail; the illustrations, most of which were prepared by the author, are excellent. The book represents a significant contribution which is especially commendable for its lucid account of highly specialized devices.

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Animal Viruses

Thomas M. Bell's book, **An Introduction to General Virology** (Lippincott, Philadelphia, Pa., 1965. 292 pp., $7.50), provides general information on the aspects of virology that deal chiefly with animal viruses. The title of the book is misleading in that it does not emphasize plant, insect, and bacterial viruses. Hence, the title should be "An Introduction to Animal Virology."

The author has provided a book that will meet the needs of those who work in the allied field of health sciences and desire a background in virology. The book will also serve the graduate student in biological sciences as an adequate supplement to the different types of textbooks that are available.

The aim of the book is served because it provides sufficient, but not detailed, information on the general prin-