

papers in three broad areas. These are, (1) new approaches to description of the human physique (methods, chemical analysis, interpretations, standards); (2) factors affecting body composition (stores in the human body, sex differences, cultural environment, physical activity, "normal" adults, growth and aging); (3) applications to study of disease (nutrition, malnutrition, degenerative diseases).

This volume has many tables and graphs which those interested in growth and biology relating to the medical and paramedical sciences will find useful. As with any collaborative efforts such as this, some chapters are clearer, more concise and valuable than others. The value and clarity, however, will depend largely on what special interests and background in the subject matter the reader has. This would be an appropriate reference book for advanced biology, and professional school libraries; it's a must for research workers in the field.

S. R. M. Reynolds
Department of Anatomy
University of Illinois
at the Medical Center
Chicago, Illinois

FANTASTIC VOYAGE, Isaac Asimov, 239 pp., \$3.95, Houghton Mifflin Company, Boston, 1966.

Here is a fantasy that should appeal to the biologically oriented reader of science fiction. It concerns a trip within the human circulatory system by the crew of the Proteus, a submarine reduced to the size of a bacterium. The goal is to clear a remotely placed blood clot from the brain of an eminent scientist whose survival is essential to "Our Side." This *coup d'état* must occur within one hour, before the miniaturized state wears off!

Our pressed and often quarreling crew represents a motley range of temperaments. There is the introverted neurosurgeon whose "scalpel" is a laser beam, and his loyal, efficient, but beautiful female assistant. There is the pilot-designer of the craft and a talkative M.D. who navigates using a 3-dimensional laser portrait of the circulatory tree. Last, but most prominent, is the young, resourceful security agent sent along to monitor the others. This he does expertly, concentrating with particular gusto on the surgeon's assistant.

This minuscule task force encounters trouble from the start. Shortly after being injected into the carotid artery, they make an unscheduled turn into an arterio-venous anastomosis. One crisis rapidly follows another: a detour through the venous side of the heart, and some scuba-diving encounters with antibodies and a white

blood cell, to mention a few.

The scientific detail is scanty, but much more probably would have fettered the story which is fast moving and brief. Still, it would have been intriguing if Asimov had been more explicit here and there: for example, in depicting how the Proteus entered the cochlear duct en route from the vicinity of the ear drum! The miniaturization process is panned off by Asimov with able verbal legerdemain. Here, to get on with the story, the reader must accept it or leave it. One aspect this reviewer found detracting and trite was the boy-meets-girl routine. Perhaps this is a carry-over from the movie scenario (something for everybody?) which, according to a prescript, preceded the Asimov version. As a whole, however, the story absorbs and sustains the attention. It could provide a bit of leavening among the tomes that crowd a biologist's shelf these days.

Arthur LaVelle
Anatomy Department
University of Illinois

PREHISTORIC AND PRIMITIVE MAN (Landmarks of the World's Art), Andreas Lommel, 176 pp., \$5.95, McGraw Hill Book Company, New York, 1966.

This handsome book is different from many general works on primitive art in that it includes prehistoric art as well as the art of recent "primitive" peoples, but, more significantly, attempts to relate the art of ancient peoples to that of recent peoples by postulating that the latter are the descendants of the former. This is a position easily assumed by a diffusionist, and Andreas Lommel, the Director of the Museum of Ethnology in Munich, frankly states that as his credo. He holds that variations in the world's art styles can be understood as being linked in a world wide historical scheme.

Many anthropologists subscribe to *some* diffusion of aspects of cultures, but would balk at accepting the much greater degree of diffusion propounded in this book. Lommel suggests, for instance, that rock paintings of recent Australia, and of Africa, are descended from the cave paintings of the European Paleolithic and from the rock paintings of eastern Spain. He also suggests that certain motifs, the representation of squatting figures, and of bent-kneed figures, diffused from early Eurasian sources to the Pacific, Africa, and even touched the Americas.

To most anthropologists these ideas could be entertained only as hypothetical formulations subject to critical consideration, but at best as a stepping-off point for further study. In other words, there may well be something to such a