granites, but that most of them are of one kind—nonmagmatic. These are his words: "Of course a magmatic intrusion, formed either by differentiation of a basic magma or by ascent of a problematic granite magma would resolve the question for the most part. But we have seen how unlikely an intrusion is, in the immense majority of cases, and notably in all cases where the formation of granite in place, or nearly in place, is affirmed for the great part of its material or almost all of it" (p. 294).

Anyone who hopes to find a fresh approach to the "granite problem" will not find it here. It is surprising to read a book dealing with granite and find not a single chemical or modal analysis. No triangular diagrams depicting these data on the different types of granites are provided in the book. No use is made of the trace element distribution in granitic rocks. The mineralogy of the feldspars is treated superficially, with no attempt to distinguish various types on the basis of mineralogy. Experimental studies on systems related to granite are barely mentioned. No mention is made of Bowen's "petrogenys residua system" or of its significance in the generation of granite magmas through differentiation of more basic lavas or in anatexis. Many geologists will be astonished to learn that the Sierra Nevada batholith is a product of granitization as are the Tertiary granites of the Alps (p. 204). The gabbro-granophyre association is not considered.

Despite the lack of quantitative chemical and modal information, the book offers a wealth of information on the field relations of granite and related rock types.

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Plant, Soil, and Microbial Interactions

Microbiology and Soil Fertility (Oregon State University Press, Corvallis, 1965. 164 pp., $4.50), edited by C. M. Gilmour and O. N. Allen, contains seven chapters, each based on an address given at the 25th Annual Biology Colloquium held at the Oregon State University in April 1964. The chapters deal with various aspects of plant-soil-microbial interactions and are presumably directed towards the perplexing and enduring question concerning the role played by microorganisms in the phenomenon of soil fertility. Although specific organisms are known to carry out biochemical transformations resulting in products available to plants, and the population as a whole can be demonstrated to be an active fraction of the soil organic matter, the presence of which so greatly modifies soil properties, soil microbiologists have long been frustrated in their efforts to control fertility through manipulation of the soil population. Plants are but one of the organisms in the ecosystem, albeit the one that man considers most important. There is a tendency to regard the microbial population as being in some vague way subservient to the higher plant, whereas in fact a cropped soil is microbiologically greatly different from an uncropped soil because of the many effects produced by the presence of living roots.

It is somewhat invidious to select particular chapters for special comment, because a high standard is maintained throughout, but perhaps it is a reviewer's prerogative to dwell on topics of especial interest to him. C. D. Moodie approaches in a thoughtful way the nature of the sites of nutrient exchange and absorption in soils, and the effects of moisture level on soil as a microbial medium. C. C. Delwiche takes a broad biogeochemical view of the distribution and cycling of carbon and nitrogen in the biosphere, pointing out that the latter contains only one part in 10^7 of the carbon on the surface of the earth. Full characterization of the major part of this, which is soil humus, still defies the organic chemist, but as F. E. Broadbent points out, recent findings do permit recognition of certain functional groups and the conclusion that it is not "entirely a disorganized collection of biological residues."

Ethel K. Allen and O. N. Allen discuss the evidence for symbiosis of soil organisms with nonleguminous plants that have roots on which nodules or other root hypertrophies are observed. In a few instances, isotopic nitrogen studies have established significant fixation of nitrogen, but they make it clear that many species have not yet been critically examined and that where organisms have been isolated from such root tissues, adequate proof of reinfectiveness and nodule production has not been given. The Rhizobium-legume association is not well understood, but according to J. C. Burton, there is still potential improvement to be realized by further physiological and genetic investigations of strain variation and host specificity.

These seven papers constitute a valuable report on the current state of our knowledge of seven topics in soil microbiology and microbial-plant relationships.

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Cultural Anthropology

Marquesan Sexual Behavior (Harcourt, Brace, and World, New York, 1966. 251 pp., $5.95), by Robert C. Suggs, represents an attempt to obtain sufficient factual data to develop an adequate picture of present Marquesan sexuality, and to salvage enough of the vanishing information concerning aboriginal sexuality to permit comparison and a study of culture change. That his attempt was largely successful is a tribute to his and his wife's objectivity and understanding of Marquesan language and culture.

The islanders were not amenable to direct biographical interviewing on sexual matters—a curious reluctance in so permissive a culture—and one perhaps attributable to missionary influence and generalized distrust of Europeans. Therefore, the data collected by the Suggses was obtained by listening to (and sometime judiciously encouraging) conversations and by observation. Since Marquesans are much given to sexual talk and gossip, this monitoring of conversation proved an effective technique. Suggs cross-checked his male-derived data with that obtained from females by Mrs. Suggs.

Following an initial chapter devoted to physical environment, history of European contact, and a brief sketch of social organization, the author employs a life-cycle approach with consecutive chapters entitled "Reproduction," "Infancy and childhood," "Puberty and adolescence," and "Marriage and adulthood." In these chapters, which constitute the heart of the volume, the author first presents the modern and then the aboriginal data.

The next two chapters are devoted to art and religion. Although explicit