Book Reviews

The Present and Future of American Indians

The Indian: America's Unfinished Business. Report of the Commission on the Rights, Liberties, and Responsibilities of the American Indian. Compiled by WILLIAM A. BROPHY and SOPHIE D. ABERLE. University of Oklahoma Press, Norman, 1966. 256 pp., illus. $5.95.

When President Johnson mentioned the plight of the American Indian in his recent State of the Union address, it was an indication that this century-old problem is due for another attempt at solution. His own task force on Indian affairs had turned in its recommendations last December; and the Bureau of Indian Affairs, under a new Commissioner, has been holding meetings with Indian groups and preparing its own recommendations for legislation. Congress, which has the final say, is still on record—in House Concurrent Resolution 108—as being in favor of terminating the special relationship existing between Indians still on reservations and the federal government as rapidly as possible, but the first experiments in that direction led to the suspension of termination policy where the consent of the tribes involved had not been obtained.

The publication of the report of the Commission on the Rights, Liberties, and Responsibilities of the American Indian thus comes at a strategic time. Initiated by the Fund for the Republic in 1957, the Commission was made up of a distinguished group of administrators, lawyers, and scholars, including O. Meredith Wilson as chairman, W. W. Keeler, A. M. Schlesinger, C. A. Sprague, K. N. Llewellyn, Soia Mentschikoff, and with the late William A. Brophy and Sophie D. Aberle, both of whom had had extensive experience in the Bureau of Indian Affairs and with Indians, as executive directors. As the most lucid and best balanced survey of the conditions of the American Indians since the report of the Merriam Survey in 1928, it should be required reading for all concerned.

The recommendations of the Commission were published in summary form in 1961, when—together with President Kennedy's task force on Indian affairs and the Declaration of Indian Purpose—they led to new administrative emphasis on the development of resources on Indian reserves. But the final report does much more than justify the conclusions. Here is the whole tangled, contradictory patchwork of Indian policy and procedure laid bare. After a survey of the history of relations between Indians and the federal government, chapters are devoted to tribal governments, economic development, the Bureau of Indian Affairs, education, health, and the policies that impede Indian assimilation. Specific sets of recommendations follow each chapter, but the most important recommendation is the first one: "An objective which should undergird all Indian policy is that the Indian individual, the Indian family, and the Indian community be motivated to participate in solving their own problems. The Indian must be given responsibility, must be afforded an opportunity he can utilize, and must develop faith in himself" (p. 23).

There is no single solution to the "Indian problem," and reasonable men may argue over the specific proposals made by the Commission. But our recent experience both at home and abroad attests to the importance of the general objective. For a century or more it has been largely missing from our Indian policy despite periodic lip service. The growth of the Bureau of Indian Affairs bureaucracy has led to a greater dependence on regulations and an increasingly impersonal relationship to Indian groups. And the laws and regulations of a century of legislation are often obsolete, contradictory, and impossible to apply.

Not all Indians are alike—or have the same problems. Of the 500,000 or more Indians in the United States, only some 300,000 are on reservations or under special federal controls, and the status of those 300,000 varies widely. The reservation superintendent needs to be given more responsibility, and the red tape that impedes most projects can surely be cut. But the most important requirement is a more flexible and decentralized policy that will involve the Indians themselves in the decisions that affect their future. On reservations where the Tribal Councils have been given some freedom in the disposition of their own funds there have been amazing changes in action and responsibility, and a growing confidence in their own abilities. The Indians need guidance and assistance in many technical matters, and especially in education, health, and economic development, but above all they ask for understanding. This volume offers a blueprint of what needs to be done in these directions, and its recommendations deserve the careful attention of our government and of our citizens as well.

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Organophosphorus Compounds

Ylid Chemistry. A. WILLIAM JOHNSON. Academic Press, New York, 1966. 398 pp., illus. $12.50.

This is the seventh volume of Academic Press's series of monographs in organic chemistry and the second to deal with organophosphorus chemistry. (The other one was R. F. Hudson's *Structure and Mechanism in Organo-Phosphorus Chemistry*.) Thus it is demonstrated that after decades of little activity in this field things have changed considerably. As a result of the discovery of the Wittig reaction certain classes of phosphorus organics, the ylids, and their chemical behavior are —or should be—familiar to every modern synthetic organic chemist.

The author of this very useful book begins by defining ylids and proposing for them a nomenclature which is consistent and reasonable. Part 1 deals with the ylids of phosphorus and contains sections on phosphonium ylids, the Wittig reaction, other phosphorus ylids, and iminophosphoranes. Part 2 describes ylids of other heteroatoms, specifically nitrogen ylids, arsenic and antimony ylids, and sulfur ylids. An author and a subject index conclude the book.

There are 840 literature references,

although there is some duplication because references are listed at the end of each chapter. Up to about the end of 1964 the references are fairly complete. Thereafter the coverage is much less exhaustive—for instance, sometimes the author cites abstracts of papers presented at meetings rather than the subsequent published papers. It is claimed that the tables, which occupy more than eight pages, "list virtually every phosphonium ylid reported in the literature with the exception of [the] few in which the ylid bond is incorporated in a ring system." A casual check revealed that at least one is missing, namely α-triphenylphosphoranyl-γ-butyrolactone [S. Fliszar, R. F. Hudson, G. Salvadori, *Helv. Chim. Acta* **46**, 1580 (1963)]. An excellent feature of the book is the attempt by the author to find general principles governing ylid chemistry. Occasionally, however (as can be expected in such a fast-moving field), generalizations are made and conclusions drawn which are too sweeping and simply not correct—for example, on page 225, "Iminophosphoranes can be readily alkylated with alkyl halides." Unfortunately one can alkylate iminophosphoranes only with methyl or ethyl halides. Higher alkyl halides such as *n*-propyl halide are dehydrohalogenated by the phosphoranes, yielding alkylaminophosphonium salts instead. Since the concept of *d*-orbital resonance is often used to explain reactions and mechanisms, the lack of a chapter on *d*-orbital bonding is unfortunate (it may, however, be the result of an editorial decision, for Hudson's book in the series includes an excellent one). After taking note of these few errors, omissions, and ambiguities I felt I had just finished reading a good and solid book.

In summary, then, the author has presented ylid chemistry in a remarkably up-to-date and readable manner. Every chemist who is involved in organic and organometallic synthesis can benefit from this book. Graduate students, in our reaction-mechanism-emphasizing times, will find a host of new approaches to the synthesis of difficult structures by a method which so far has been mentioned only too briefly in their texts. Those already working in the field can use this book as a convenient key to its literature, and those who want to get acquainted with ylid chemistry will find it a good and trustworthy guide.

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Catalog of Genetic Variations

Mendelian Inheritance in Man. Catalogs of Autosomal Dominant, Autosomal Recessive, and X-Linked Phenotypes. VICTOR A. MCKUSICK. Johns Hopkins Press, Baltimore, 1966. 364 pp. $8.

The conclusion expressed in several introductory textbooks that man is not a particularly suitable object for the study of genetics has lost a good deal of cogency. It is possible that mouse hemoglobins might have led to the concept of "molecular disease" as formulated by Pauling, had the mutation which produces sickle cell anemia occurred in *Mus musculus* instead of man. It is surely conceivable that the metabolic pathway for tyrosine metabolism would have been defined if man suffered no such infirmities as alkaptonuria, phenylketonuria, and albinism. Nonetheless, these diseases and many more have added the stimulus of medical responsibility to that of intellectual curiosity in studies that are providing important information about genetic mechanisms.

The need for a work like *Mendelian Inheritance in Man* has long been apparent. The most recent publication in English that has attempted to summarize all of the genetic variations in man, Gates's *Human Genetics,* was last published in 1946. When one considers that Gates's was a large, two-volume work and that 20 years of productive research in genetics has intervened, it is surprising that the present summary could be condensed to one volume of 364 pages.

McKusick has limited the entities covered in these catalogs to those which follow Mendelian patterns of inheritance with certainty (designated by an asterisk and totaling 574) and those for which the evidence seems sufficiently strong (totaling 913). He has further confined the catalog of recessives mainly to rare phenotypes, that is, those for which the homozygote frequency is 1 in 1000 or less. The total of 1487 have been separated into dominant and recessive as these terms were defined by Mendel and into autosomal and X-linked. In his foreword the author estimates that the 837 dominant, 531 recessive, and 119 X-linked phenotypes listed reveal only a small portion of the genetic loci of man, "perhaps only 1 per cent of the whole." He concludes his foreword with the statement: "I have no illusions of either the infallibility or the completeness of these catalogs. I will appreciate suggestions for increasing the usefulness of the catalogs and would like to have errors and omissions called to my attention."

This is a scholarly and thorough collection of knowledge, as of June 1966, of man's genome as manifested in the phenotypes which have been described. Shortcomings result largely from unavailability of information. The task of accumulating and judging that information which is available was sufficient to require a program for storage on magnetic tape in order to facilitate revision and republication. The bulk of the volume is made up of the IBM printout with its own idiosyncrasies, such as "Q" for "?" and parentheses to enclose material usually designated by superscripts or subscripts. Each entry includes: (i) the preferred designation (eponyms are cross-referenced in the appendix); (ii) a brief description of the phenotype with a résumé of genetic information; and (iii) key references. The descriptions of the phenotypes range from something as brief as the name of the entity, for example, "Radial heads, posterior dislocation of," to a seven-paragraph discussion of "Testicular feminization syndrome." Most, however, are brief and refer to more extensive descriptions in the references cited. I found little to quibble with in the material presented. The stated intention of describing manifestations in the heterozygote has not been carried out in the entries for several recessive conditions, for example, pyruvate kinase deficiency of erythrocytes and phenylketonuria. The hemoglobinopathies are all included in the dominant catalog, although the genetic mechanism that leads to production of tetramers of β-, γ-, or δ-chains is probably a complicated kind of recessive inheritance. Much more information is needed to complete the presentation of gene frequencies in order to make this collection as useful as it might be in genetic counseling. This body of data will surely change and grow in later editions.

McKusick is to be complimented on the arduous task well done. This book should be in the library of all biologists, medical or other, who are interested in genetics. A word of warning to any who choose to convert their filing systems to conform to the 1000, 2000, 3000 categories used by McKusick to number the alphabetized dominant, recessive, and X-linked entities, respectively: decimals and one or more additional significant figures in