

Plate one illustrates the venation of the tegmina of species of *Phoetaliotes* and of *Melanoplus*; the other plates, 2-26, show the abdominal appendages of the males of all but five of the species described.

In an appendix are given (1) a list of the heretofore described North American species with original and present nomenclature, (2) brief notes on undetermined forms, and (3) a list of South American *Melanopli*.

Mr. Scudder's contention (p. 187) for crediting *Melanoplus spretus* to Uhler can hardly be accepted; it is directly against the well-established canon that a name must take its authority from the author first defining it, and if admitted and generally applied would cause much instability in nomenclature.

Typographically both text and plates are well done; a few inaccuracies and omissions may be noted: page 76, *Ann. rep. chief eng.*, the date 1877 should be 1876; page 267, *Can. nat.*, and *Bost. journ. nat. hist.*, the date 1868 should be 1862; page 270, the date of Fieber, *Lotos*, is given 1853 and on page 403 as 1854; page 360, the date of Serville, *Orth.*, is given 1839 and on page 404 as 1838; page 403, *Pezotettix altitudinum* and *P. chenopodii* are omitted from the list, 1868 for *Pezotettix borealis* should be 1862, *Acridium differentiale* Uhler should be Uhler *Ms. Thomas*; page 404, 1879 for *Pezotettix marshallii* Scudder should be 1876.

SAMUEL HENSHAW.

*Ethnological Studies among the Northwest Central Queensland Aborigines.* By WALTER E. ROTH. Brisbane, Government Office. 1897. With 438 Illustrations. Pp. 199.

Mr. Roth was for several years surgeon to various hospitals in the districts south of the Gulf of Carpentaria, and had excellent opportunities for studying the languages and customs of the native blacks. The results he has condensed in the present volume. They rank among the most valuable contributions ever made to the ethnography of Australia, partly because the writer is a trained observer and careful narrator, partly because he made himself acquainted with the dialects of the tribes, without which knowledge it is vain to attempt an

understanding of the ethnography of any people whatsoever.

One of his discoveries was that of the existence of a well-defined, manual-sign language extending throughout the entire district of his study, and indications of its presence elsewhere. Of these manual signs he presents 213 with their significations, some conveying simple, others complex ideas.

An excellent conspectus of the languages, grammatical, lexicographic and comparative, shows their structure and relationship. The intricate subject of personal nomenclature, consanguinity and class systems is clearly set forth and shown to be not the prevention of incest, as most writers have taught, but a scheme to regulate the proper distribution of the food supply. In this connection it may be added that he also corrects the common notion that the operation of introcision, practiced on the males, is for the purpose of limiting procreation. It has, in fact, no such effect.

The aboriginal food-supply is exhaustively considered. Cannibalism continues till this day in the outlying districts, and death from the most repulsive diseases does not prevent the corpse being eaten. Much information is added on implements, utensils, personal ornaments and trade or barter. Among these the various forms of the boomerang are described and figured. Of the message sticks Dr. Roth says positively that the designs upon them convey no significance and are intended merely to distinguish them from the sticks belonging to others.

The lines of barter are widely extended through Australia; their course is marked by certain signs and signal posts, easily caught by the native eye, and in spite of the constant wars a comparatively active commerce exists. One of the most interesting articles of barter is that of songs and dances (*corrobborees*). These are taught for pay (blankets, food, etc.) by one tribe to another. A tribe often sends picked men long distances to learn them, and, what is singular, the songs are frequently in a language wholly remote and unintelligible to the tribe buying them, but they are learned by rote and repeated with surprising accuracy (as the ignorant priest does his Latin liturgy).

The last chapter is entitled 'Ethno-pornog-

raphy' and relates the ceremonials by which the males and females are admitted to the rights of puberty and social rank. They are severe in the extreme, but are carried out inflexibly. No explanation of their rites is satisfactory, and that of the author, that it is merely for convenience, is no better than the others.

In the midst of the debasement reflected in the general condition of these tribes, it is interesting to learn that law and order, as they understand the terms, are maintained, and that a culprit is well aware of the punishment following his misdeeds and submits to it. When that punishment is death he quietly digs his own grave and awaits the spear thrusts which consign him to it.

The volume contains nothing on the physical anthropology of the natives and is very meager on their religious views.

D. G. BRINTON.

*Iowa Geological Survey, Artesian Wells of Iowa.*

Vol. VI., pp. 115-428. By W. H. NORTON. Des Moines, State Print. 1897.

Although the subject of artesian wells and their utilization in the redeeming of the arid regions of the world commands general interest, still one would scarcely expect to find so much of interest to the unprofessional reader in the official report of a State Geological Survey.

The first section of Mr. Norton's report gives one an excellent idea of the artesian well in its historical development as well as in its present distribution, nomenclature and classification. These chapters will amply repay the untechnical reader and will also give the specialist a point of view which he is too apt to overlook in his application to details.

The remaining chapters are devoted to a very satisfactory and exhaustive setting forth of the records of the artesian wells of Iowa. Very many geological sections of individual wells and also of extended regions, together with full and conservative discussion, help to give one a very clear idea of the stratigraphic, hydrographic and hydrostatic conditions which exist in that State. In view of the interest attaching to the question of subterranean temperatures and the valuable information obtained from wells in the Dakotas northwest of Iowa by Mr. N. H. Darton, it is

perhaps to be regretted that the report did not include the temperature of the flowing water, at least where the volume is considerable. From the popular explanation as to why these wells are called artesian, from Artois, instead of Mutinian, from Mutina, to the technical discussion of the stratigraphic conditions in their relation to sea-level, the volume is interesting and instructive; and although it is to be received chiefly as a contribution to our knowledge of the subterranean waters of Iowa, nevertheless it will serve as a valuable key to similar conditions in other localities.

W. HALLOCK.

*The Mystery and Romance of Alchemy and Pharmacy.* By C. J. S. THOMPSON. London, The Scientific Press (Limited). Pp. xv + 335. 12mo. Ill.

As foreshadowed in the title, the author of this work has not attempted a systematic history of alchemy and of pharmacy, but has gathered much curious information as to the mystery surrounding them in bygone ages and the romance associated with them. The first five chapters deal with the art of healing, the earliest fathers of medicine and the necromantic practices of the Greeks and Romans. In the sixth chapter we are introduced to the alchemists, and here the author shows his unfamiliarity with the results of modern historical researches; he states, for example, that the word chemistry first occurs in the writings of Suidas, whereas everyone knows that it is found six centuries earlier in the astrological treatise of Julius Maternus Firmicus, entitled *Mathesis*. Mr. Thompson also credits the Arabian Geber with knowledge of nitric acid, nitrate of silver and hydrochloric acid, as described in the *Summa Perfectionis* and *Liber Philisophorum* [sic], whereas Berthelot showed in 1893 that these Latin treatises are fraudulently ascribed to Geber, who had no knowledge of the mineral acids. To enhance the romantic and mysterious phase of his subject, Mr. Thompson has introduced several chapters on 'The Black Art,' 'Black Magic' and the occult sciences. The work is stronger on the medical side than on the chemical, the chapters on 'Curious Remedies,' 'Surgery in the Middle Ages,' 'Amulets,