the first time on *Ribes* stems. Three natural stem infections were observed on a plant of *Ribes hirtellum* Michx. (*Grossularia hirtella* (Michx.) Spach) growing in a pine woodlot at Kittery Point, Maine. In this same woodlot two other isolated plants of the same species, inoculated with æciospores by applying the moistened æciospores to the unwounded green stems, developed respectively one and seventeen stem infections. Of the seventeen infections some were very evidently natural infections since they occurred at points on the stems where no æciospores had been applied.

Uredinia were produced on some of the stem infections from the middle of June until August 20. The urediniospores which were formed in these sori were apparently normal in every way. In the case of the other stem infections, where no uredinia appeared, study of sectioned material showed an abundance of mycelium and numerous well-formed internal uredinia in the cortex.

The discovery of sporulating uredinia on *Ribes* stems complicates the already difficult problem of detecting the disease on *Ribes*. In view of the observations recorded above, it must be concluded that no *Ribes* from infected regions can be declared absolutely free from the rust even when completely defoliated. Moreover, the presence of the mycelium and internal uredinia in the stem tissue is strong evidence that the disease does in some cases winter over on *Ribes*.

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SCIENTIFIC BOOKS

Dioptrographic Tracings in Three Normæ of Ninety Australian Aboriginal Crania. By DRS. RICHARD J. A. BERRY and A. W. D. ROBERTSON. Transactions of the Royal Society of Victoria, Vol. VI., 1914.

The volume at hand contains 270 "life-size" tracings of crania of Australian natives. The number of skulls dealt with is ninety, each one being represented uniformly from the front, side and top. The publication follows one of a similar nature in which tracings were given of 52 Tasmanian skulls, by the same authors, and reviewed by the writer in SCIENCE of December 16, 1910.

As to derivations, the skulls utilized with six exceptions are all from the southeast part of Australia, *i. e.*, from the region south of the Murray River; the six exceptions are from Queensland.

The authors accompany the publication with the statement:

> We are solely desirous of making available to our scientific colleagues elsewhere, material of a valuable character, and which is otherwise inaccessible, and which runs the further risk of being lost in the process of time unless so collected. We do not desire to impose our own deductions derived from a study of this material upon those who may hold different opinions from ourselves, and hence we do not incorporate here, nor did we do so with the Tasmanian tracings, the result of our own observations on highly debatable questions, with the material itself. The conclusions which we ourselves drew from the Tasmanian material have been published in the *Proceedings of the Royal Society of Edinburgh*, Volume 31, 1910, and similarly the conclusions which it is our intention to deduce from the present material will be made available elsewhere, and in due course. Thus those who desire to make use of the present material for other purposes will have a free hand both now and for the future.

As in the case of the tracings of the Tasmanian crania, anthropologists are thankful to Drs. Berry and Robertson for their painstaking work; but as the Tasmanian volume so the one at hand presents certain serious deficiencies which are badly felt and which can scarcely be compensated for by any subsequent publication on the series.

In the first place there is no identification and subdivision of the specimens according to sex. They are evidently all of adults, yet even this is not certain. But the most serious deficiency is the omission of all measurements. An illustration without at least two or three of the principal measurements does not convey, a full measure of confidence. It is probable

that the dimensions of the illustrations are perfectly true, but had a few measurements been given with each illustration this probability might have become a certainty.

The work incites, but does not satisfy; which should not be taken as criticism, but rather as a stimulus for the future. We need more than tracings. We need, in a most precise form, every possible detail concerning the cranium as well as the rest of the skeletal and physical make-up of the Australian; and may Drs. Berry and Robertson be soon in a position to give us this information.

ALEŠ HRDLIČKA

The Culture and Diseases of the Sweet Pea. By J. J. TAUBENHAUS. New York, E. P. Dutton & Co. Pp. xx + 232.

In the preface the announcement is made that this book is primarily intended to be a practical treatise for use by both growers of sweet peas and investigators. Those interested in the culture of this plant will no doubt find this book a very useful and helpful guide. It is among the few books which deal with both the culture and diseases of one particular crop. The author's reason for including both phases in the same treatise is naïve in that "the attack of most plant diseases depends on some weak point in the cultural methods which has weakened the host at some phase of its life history."

The first eighty-nine pages are devoted to explicit cultural directions which have been prepared for the author by specialists. The following ninety-five pages are given to a consideration of greenhouse and field troubles, including nine diseases of fungous origin, one of bacterial origin and a brief summary of the several insect pests. Due space is given in the closing chapters, in a clear, concise manner, to methods of prevention and control of these maladies.

The essential facts in the author's several important investigations on the diseases of sweet peas are summarized in this book, yet it is believed that the investigator would prefer to consult the original reports. The grower, himself, can best judge of the author's success in avoiding the use of technical terms. This same difficulty which confronts every teacher of elementary plant pathology has been encountered, and if one were to put himself in the position of the average reader he would find himself at times in a maze of meaningless terms. Certainly the person of less than collegiate training would find himself hopelessly lost if he attempted to wade through certain paragraphs in this book and at such points, one is even disposed to wonder what verbiage the author would have chosen had he purposed to use technical terms.

The binomial *Ascochyta pisi* Lib. was probably employed because it is better known than is the name for the ascigerous stage.

The book is well and amply illustrated, is unusually free from typographical errors and gives the impression of being condensed yet complete. It should have a place in the reference library of plant pathologists and of growers of sweet peas.

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FIELD CONFERENCE OF CEREAL PATHOLOGISTS

THE Third Annual Field Conference of Cereal Pathologists of the American Phytopathological Society was held at Madison, Wisconsin, on July 9, 10 and 11. About forty were in attendance at the various meetings. The following program was presented:

MONDAY, JULY 9

The forenoon was spent in visiting the plant pathology laboratories of the University of Wisconsin. In the afternoon, after a discussion by Dr. A. G. Johnson upon "Imperfect Fungi causing Cereal Diseases," the session was continued in the field, where Dr. Johnson's experimental plots were examined. In the evening a supper and smoker were given at the University Club, and in the round-table discussion which followed, the following discussions were given:

1. *Grass rusts and their rôle in cereal conservation;* Leaders, *Dr. J. C. Arthur, Dr. E. C. Stakman.* Dr. Arthur gave a historical dis-