and two of his daughters. It would be very interesting to learn whether this peculiarity was passed on to his grandchildren.

Moreover, in the embryo in the very early weeks of its life, the lower end of the spine projects downward further than the legs. But soon the legs outgrow this effort to provide a tail and the end of the spine shrivels, leaving normally only the coccyx to remind us that all of us have had potential tails.

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## CITATIONS OF SCIENTIFIC LITERATURE

WITH reference to the second question in Dr. E. G. Boring's letter in the issue of SCIENCE of April 30, 1926, may I give the results of my own experience—more in the use of than in giving literature references? As the result of considerable bibliographic work on several branches of chemical literature, it seems to me highly desirable that the general order of a journal literature citation should be as follows:

(1) Name of the journal, abbreviated if it is a widely distributed and well-known publication; otherwise given in full.
(2) The year of publication.
(3) Series number, if any.
(4) Volume number, or corresponding designation (as Jahrgang), in bold face type.
(5) Page numbers, or number of issue. Trade publications sometimes offer difficulties here, owing to the absence of issue numbers, or the separate pagination of each sisue.

As an example, "*Bull. Soc. Chim.*, Paris, 1899, (3), **21**, 1073–75."

The chief reason for this arrangement is that in libraries the bound volumes of journals are arranged in the order of the years of publication, and much confusion in locating the proper volume may be introduced if either the year or series number has been omitted, and especially when both have been omitted, as occasionally occurs. The problem is somewhat simpler, of course, in the more numerous publications which do not publish their volumes in separate series.

While the late Professor Joseph H. Kastle was at the Hygienic Laboratory, in Washington, D. C., I looked up for him a great many references in the Library of the Surgeon-General's Office, and I was told by the attendants at the library that I would save them time if I would put the year immediately after the title of the journal on the request slips. I did not entirely realize the advantages of this arrangement at that time, but it has certainly been my experience since that for reference purposes it is the most convenient form. Placing the date after the volume number in the case of journals such as the *Berichte der deutschen chemischen Gesellschaft*, where the page numbers are frequently numerically equal to current years, has more than once resulted in the year being copied for a page number, with consequent loss of time and patience by an investigator who has to consult an index in another volume to correct his reference.

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REPLYING to Boring's question (SCIENCE, April 30, 1926, p. 456) concerning the place of the date in a citation I may be allowed to state that there seem to be several good reasons why the date should be placed at the end of the citation and not intercalated between volume and page. The most weighty reason seems to me the danger that the date of publication may be confused with the year for which the volume is issued and which, if given, will have its rightful place after the volume, *e.g.*, Proc. Indiana Acad. Sci. **34** (1924): 255 (1925), which means that vol. 34 contains the Proceedings for the year 1924, but was published in 1925; if the date of publication were following the volume, it would very likely be taken for the year for which the Proceedings were issued. Another reason is that the publication of a volume often extends over more than one year and that the date of publication in this case belongs properly to a certain number or part and as this is usually not mentioned in the citation, but is only indicated by the page, the date belongs to the page rather than to the volume. A third reason is that the date is not absolutely necessary to a clear citation and if given should not separate the essential parts which consist of volume and page in a periodical or work of several volumes.

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## INTRODUCTION OF LEMMINGS ON ST. PAUL ISLAND, ALASKA

IN JUNE, 1925, a number of Pribilof lemmings (*Lemmus nigripes* True) were collected on St. George Island, Alaska, by the Bureau of Fisheries and transported to St. Paul Island by the U. S. Coast Guard cutter *Algonquin*. During the time that the animals were in captivity a number of young were born, but the record does not show that any of these survived. Six males and six females were liberated near Lake Hill Lake, St. Paul Island, on June 25. Subsequent observations showed that the animals had established runways and were apparently doing well.

This species of lemming is known only from St. George Island. On a number of previous occasions years ago specimens of these animals were brought

from St. George Island to St. Paul Island, but there is no evidence to show that they survived in their new habitat.

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## APROPOS THE "WHITE INDIANS" OF DARIEN

THE following is a quotation from Joseph Esquemeling, "The Buccaneers of America,"[1] Chapter XXV, published in 1699. Esquemeling is describing his own personal observations.

> We sailed from thence [Bocca del Toro] March 23, 1679, and in our way touched at the islands called Zambles. These islands reach eight leagues in length, lying fourteen leagues westward of the River Darien. Being here at an anchor, many of the Indians, both men and women, came to see us. . . . The men here go naked, . . . The men paint themselves sometimes with streaks of black, and the women with red: The women have in their noses a pretty thick ring of gold or silver, and cover themselves with a blanket only: they are generally well featured; *among whom I saw several fairer than the fairest of Europe, with hair as white as the finest flax; 'tis reported of them, that they see better in the dark than in the light.*[2]

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## SCIENTIFIC BOOKS

*Helmholtz's Treatise on Physiological Optics.* English Translation from the Third German Edition. Edited by JAMES P. C. SOUTHALL. Volume II, "The Sensations of Vision," 1924, viii + 480 pp.; Volume III, "The Perceptions of Vision," 1925, x + 734 pp. Published by the Optical Society of America.

THE appearance of the third volume of the English translation of Helmholtz's great "Handbuch der physiologischen Optik" completes one of the most notable scientific publications of recent years. Helmholtz's "Optik" is a unique book from many angles. It is unique in the thoroughness with which it displays the versatility of the master scientific mind of the nineteenth century. It is unique in the completeness with which it summarizes and establishes the science of physiological optics. Even more, it is unique in its longevity; originally decades in advance of its times, its friends have not permitted it to grow old; they have dressed it in many new chapters and appendices and its original vigor has carried it on for seventy years. The present English translation, by Professor Southall, provides the English-reading public with something more than a newly intelligible classic; it offers an up-to-date compendium of the most fascinating branch of optics. In its field, Helmholtz's treatise has no rivals and is unlikely to have any for years to come. What modern scientist would dare to write a book like this, even if he were able to do so? What publisher would dare to print it as a commercial venture?

To review the contents of so classical a work seems supererogatory and anachronistic, yet there may be those to whom such a review may convey an impression which they had previously lacked. The first German edition appeared in three parts, during the years 1856, 1860 and 1866, respectively; forming *Band IX* of Gustav Karsten's "Algemeine Encyclopädie der Physik." The work was combined into a single volume with the imprint of Leopold Voss, of Leipzig, in 1867. (The reviewer has a copy from the library of William James, marked "Dresden, June, 1868" and containing the personal cards of "Dr. Hermann von Helmholtz, Präsident der Physikalisch-Technischen Reichsanstalt. Berlin, 16. Neue Wilhelmstrasse," and "Frau von Helmholtz geb. von Mohl.") A translation into French was published in 1867. A second German edition began to appear in 1885 but was not completed until after the death of Helmholtz, which occurred in 1894. As a single volume, under the editorship of Arthur König, it was published by Voss in 1896. This edition had been extensively revised and brought up to date by Helmholtz and König. It met with less favor from critics than did the first edition, and when Gullstrand, von Kries and Nagel prepared the third German edition (1909–1911), they based it upon the original text.

The present English translation is from the third German edition. It offers all the detailed appendices which were added by Gullstrand, von Kries and Nagel, and is further supplemented by new appendices and notes, some of which are by the German editors just named. It is perhaps regrettable that certain of Helmholtz's theoretical discussions, peculiar to the second edition, could not have been included. This is especially true of the second part or volume, dealing with visual sensation, to which Helmholtz made some very interesting additions. However, the subject-matter of these additions is treated in the appendices in a manner technically more adequate than that of Helmholtz, if lacking in the touch of his master mind.

The first of the three volumes of the English edition has already been reviewed in these pages. It deals

[1] Edition of 1853, Benjamin B. Muncy & Co., Boston, pages 180–.

[2] Italics mine.