

There is an increase in the size and number of pellets with each instar until in the last there is evidence of extremely voracious feeding. The duration of the feeding part of each stage was 30, 50, 60, 70 and 80 hours.

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INDEXING AND FILING SCIENTIFIC PHOTOGRAPHS

RECENTLY the author has had occasion to consider at some length the problem of indexing and filing geological photographs. Inquiry among photographers and professional colleagues has revealed that there is a wide variety of possible systems and that in a surprisingly large number of instances the collections are characterized by little or no system. In the field sciences, particularly geology and geography, some system of filing photographs is absolutely essential. This has been very forcibly brought home here at the University of Maine. The geology department recently received the gift of a considerable number of photographs and negatives of a geologist who died suddenly. Unfortunately, negatives and prints were separate and many of each lost. Localities were impossible to identify except in the few cases where there was a notation on the back of the print, or were identified by personal recognition. The value of the collection, hence, is only a fraction of what it might have been otherwise.

Some photographers use albums for the preservation of prints with sections devoted to various aspects of subject-matter. Negatives of such prints are easily lost or confused. Some use a continuous number system, the individual pictures being numbered in order of acquisition. No mineralogist would think of arranging a mineral collection in any such order, and a photographic collection so indexed or numbered is equally confused.

The following system has been devised here at the University of Maine for our geology collection. Although at present the collection is small, it is planned as the nucleus of a continually growing collection, and the system is elastic enough to take care of any expansion. Our system is, in brief: Prints are mounted on the face of a four-by-six envelope. On the back of each print and envelope is written the exact locality and date, a number and such other data as may be desirable. The proper number is also printed in the upper left-hand corner of the face of the envelope; if a lantern slide of the photograph has been made the number is printed in red, otherwise in black. The corresponding number is also inked onto the negative, and the negative placed in the envelope. Index tabs between the various major divisions are placed in the file, so that the photographs are naturally grouped.

The numbering system used is a decimal system. An example of our practice follows: One of our pictures has the number 8.11-3. The "8" at the left of the decimal indicates glacial work; the first figure "1" at the right of the decimal indicates erosion; the second "1" indicates striae and polished surface; the last figure, "3," indicates that this is the third of such photographs on file. Another of our pictures is 4.112-5. The figure "4" at the left of the decimal point indicates streams; the first figure "1" at the right of the decimal point indicates erosion; the second "1" at the right of the decimal point indicates the stream is in the youthful stage of the erosion cycle; the third figure at the right of the decimal point indicates pot-holes; the fourth figure individualizes that particular photograph. A supplementary card index may also be of value.

The system can be modified in a number of ways to meet varying requirements. Special collections may be headed by other figures at the left of the decimal. (The figures we are using at the left of the decimal in our general collection correspond to the chapter numbers of a very widely used introductory text-book of geology—but this is merely for convenience in assigning the picture to the general group.)

It is hoped that this note may be of some value, in a suggestive way, to the apparently considerable number who have no very satisfactory way at present of filing and indexing photographs. No claim is made for the originality of this system. Possibly similar systems may be in vogue in many individual instances, although such have not come to the writer's attention.

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BOOKS RECEIVED

- HAMILTON, W. J., JR. *American Mammals*. Pp. xii + 434. 92 figures. McGraw-Hill. \$3.75.
- HIRSCHLAFF, E. *Fluorescence and Phosphorescence*. Pp. vi + 130. 42 figures. Chemical Publishing Co. \$1.50.
- MELLANBY, HELEN. *Animal Life in Fresh Water*. Pp. viii + 296. 211 figures. Chemical Publishing Co. \$3.50.
- PORTEVIN, G. *Ce qu'il faut Savoir des Insectes. Vol. II, Coléoptères et Hémiptères*. Pp. 307. 14 plates. 100 figures. Paul Lechevalier, Paris. 40 fr.
- REED, C. I., H. C. STRUCK and I. E. STECK. *Vitamin D: Chemistry, Physiology, Pharmacology, Pathology, Experimental and Clinical Investigations*. Pp. xviii + 389. 13 figures. University of Chicago Press. \$4.50.
- SHEPHERD, WALTER. *Science Marches on*. Pp. 420. 188 figures. 31 plates. Harcourt, Brace. \$3.00.
- Smithsonian Institution, Annual Report of the Board of Regents, 1938*. Pp. xiii + 608. Illustrated. Superintendent of Documents, Washington. \$1.50.
- SVEDBERG, THE. and K. O. PEDERSEN. *Die Ultrazentrifuge; Theorie, Konstruktion und Ergebnisse*. Pp. xii + 436. 154 figures. Theodor Steinkopff, Dresden. RM 27.75.
- Texas Agricultural Experiment Station. Commercial Feeding Stuffs; from September, 1938 to August, 1939. Bulletin No. 578*. Pp. 205. *Iodine in Texas Soils. Bulletin No. 579*. Pp. 25. 1 figure. Agricultural and Mechanical College of Texas, College Station.