slow-moving glacier, and a glacier is dry when it is cold. Likewise a wet glacier moves rapidly, and a wet glacier is comparatively warm. It may well happen that a slight rise in temperature would cause a forward movement of the ice edge and a slight fall in temperature a regressive movement. Again, heavy snowfall results in rapid accumulation of ice and is followed by an acceleration in the forward or outward push of the ice mass, while a lessened precipitation must result in slower movement and decrease in volume. Possibly, the present retreat of the Antarctic ice is due to a progressive desiccation of Antarctic climate. Temperature is by no means the only, nor necessarily the determining, factor.

At the same time, it is doubtless true that the climate of the globe is now warmer than it was during the episodes of extensive glaciation characterizing the Pleistocene Ice Age, which by the way, was equalled in the magnitude of its ice sheets by at least one earlier glacial period, that of late Paleozoic time. Moreover, from the geological point of view the present world-climate, with its polar refrigeration and marked climatic zones, is abnormal; the earth has offered a much more congenial environment than this throughout the greater part of its recorded history. But the data are not now sufficient to point clearly toward a swift and steady replacement of the present semi-glacial temperatures by those of normal and more hospitable range.

Placing the present moment in earth history in its true perspective with relation to the preceding geologic incidents, several alternatives arise concerning what will be disclosed on the geologic morrow. During Quaternary time oscillations in climate are recorded by at least four episodes of glaciation separated by intervals of partial or complete deglaciation. The last great swing of the climatic pendulum reached its farthest limit in the direction of refrigeration about thirty thousand years ago. It is possible that the return oscillation will carry the weather conditions back to those of the normal, ice-free, geologic period, and Quaternary glaciation will be a thing of the past. On the other hand, it is just as likely that the backward rush of the pendulum is now retarding and that soon it will be poised for another sweep in the opposite direction to bury middle latitudes beneath the weight of ice sheets of a new glacial stage. In that case we are to-day not in a post-glacial but an inter-glacial time such as that enjoyed by the men of Neanderthal, when osage oranges and paw paws flourished north of Lake Ontario and figs grew in the Kootenay Valley.

It is unfortunate that no certain selection may be made from these alternatives of the one which is imminent, for the question is one of more than academic interest. Legislation which is forward-looking, far-reaching plans for racial progress, promotion of economic welfare, all must be radically influenced by the knowledge—if we had it—that in ten thousand years the Barren Lands of the north could support a population of fifty to the square mile, or that in a similar interval the available farm lands of the globe will be reduced to half their present area.

The key which will unlock the mystery of the major climatic trend of the present time is not to be found in observations upon the terminal position of ice sheet or glacier, unless those observations are extended over centuries. It is rather to be sought in the determination of the influence which the combustion of coal in this industrial age is exerting upon the carbonic-acid content of the air, and of the headway which the warm (though unusually salt and therefore heavy) water of the Mediterranean Sea is making as it creeps outward through the Straits of Gibraltar down the sloping floor of the Atlantic ocean and spreads poleward beneath the cold but fresher water of the deep sea.

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LABELING OF MICROSCOPICAL SLIDES IN STAINING TECHNIQUE

THERE seems to be distinct need of a satisfactory method of temporarily labeling microscopical slides destined for the staining, wash-

ing, dehydrating and clearing processes in ordinary microtechnique, especially when objects and stages of diverse nature are to be passed through in large numbers at a time. Higgins's waterproof ink and preparations involving sodium silicate either wash off, or, if they survive to the end, rub off when dry in spite of even the most careful handling. West, in a recent number of SCIENCE,[1] suggests the use of numbered aluminum clips and a notebook. This method would appear to be clumsy and wasteful of time and imperfectly adapted to slides of varying thickness, besides necessitating permanent labeling of the slides as soon as the small supply of clips becomes exhausted. To meet these objections, an ink has been devised which apparently answers all ordinary requirements of the investigator. It has been used in the making of hundreds of slides, and one supply made two years ago is still giving great satisfaction.

The method of making the ink may be stated briefly as follows: 15 g. of best cabinetmakers' glue are dissolved at low temperature in 100 c.c. of water in a clear glass bottle. To this is added an excess of crystals of potassium dichromate and the mixture is exposed for a week or more to strong light, after which it is filtered. India ink is rubbed into this "stock solution," a slate ink cup or grinder being employed. A little of the solution is poured into the cup and a stick of India ink is applied, the rubbing being done with a circular motion. When sufficient blackness is obtained, the ink is removed with a dropper to a small bottle; the operation is repeated with a new supply of stock solution until a sufficient quantity of ink is accumulated. A supply sufficient for several years' use can be made in this way in the course of an hour or two.

The ink will keep indefinitely if care is taken to prevent evaporation. It may best be kept in a small narrow-neck balsam bottle with ground joint, the joint being further sealed with a thin coating of vaseline. The label end of the slide should be clean and free from fixative, when the ink will flow freely. An ordinary clean, medium-pointed steel pen may be used. A dozen slides may be labeled with accession number, thickness of ribbon and other data with a single dipping of the pen. The ink will dry thoroughly in a few minutes at ordinary room temperature, after which the slides may be passed through the alcohols, stains, water and xylol without deterioration of the label. On completion of the slides the label may be left as originally made and the slides stored in this condition until they are wanted. This will be found sufficient for most research problems. If it is desired at any time to replace the original label with a permanent one, the ink may be quickly scraped off with a scalpel and replaced by a pasted label. In doing this the figure or letter usually comes off entire with a slight lifting movement of the knife.

[1] N. S., Vol. XLVII., No. 1201, January 4, 1918, p. 22.

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PROFESSIONAL COURTESY

IN the January, 1918, number of the *Journal of Biological Chemistry* appeared an article by E. V. McCollum and N. Simmonds, now of Johns Hopkins University, entitled "A Study of the Dietary Essential, Water-Soluble B, in Relation to Its Solubility and Stability Towards Reagents."

This work, as the article indicates, was done, but not prepared for publication, in the laboratory of agricultural chemistry of the University of Wisconsin. The authorship of this article does not properly give credit to those participating in this research. On page 62 a footnote briefly states that "Credit is due Mr. H. Steenbock for the preparation of the extracts employed in this work." This representation is a gross injustice to Professor Steenbock and displays a marked transgression of common professional courtesy and ethical standards on the part of the authors of this article. Professor Steenbock not only contributed much, if not all, to the thought expressed in the preamble of this article, but the details of making the vitamine preparations and the