not good usage. The Latin word is properly "*fetus*" in both singular and plural. One error in citation has been noted, *viz.*, "The Anatomy of the Domestic Animals," by Dr. Septimus Sisson, is referred to as the work of "A. Sisson." These are, however, minor errors which undoubtedly will be corrected in later editions. Professor Baumgartner, out of nearly twenty years experience in the teaching of large classes in comparative anatomy, has produced this manual for which he deserves the thanks of all teachers of that subject. He thus makes available for their use a form the availability of which has not been so widely realized as it deserves.

UNIVERSITY OF KANSAS H. H. LANE

SCIENTIFIC APPARATUS AND LABORATORY METHODS

A SIMPLIFIED METHOD OF MICRO-COMBUSTION: THE MICRO-DENNSTEDT METHOD

WHILE we have no doubts as to the excellency of the micro-combustion methods of Pregel, we have encountered practical difficulties, which have forced us to abandon them. Micro-methods are gaining increased importance in biochemistry and a practical and easy method for determining the composition of organic substances in 5–10 mg quantities will open up new fields of research. Our work concerns mainly the determination of nitrogen according to Dumas and of carbon and hydrogen. In micro-Dumas, according to Pregl, we have obtained constantly too high results, while according to Dubsky the results were right from the start. The main difference in these two methods is the placing of the reduced copper in the tube and passing of the carbonic acid. We have combined the useful points of the two methods, namely, the combustion tube and Kipp apparatus as source of carbonic acid from Pregl, the placing of the reduced copper at the end of the tube and passing of CO_2, after the air is expelled, in small stream according to Dubsky. The results in this way are excellent.

Our main work concerns, however, the determination of carbon and hydrogen. Here, according to Pregl's method, we had out of seventy analyses seven good results, in spite of great care exercised in keeping to the original recommendations of the author. We have adapted the Dennsted's method for micro-work and had from the start almost 100 per cent. of good results and it seems surprising that this simple and excellent method has not been adapted before for the said purpose. The details of the method will be published elsewhere, and we wish here only to state the main advantages of our procedure: (1) An almost empty combustion tube, except for boats with absorbing substances, in which all the combustion is plainly visible; (2) the capacity and constancy in weight of the absorption apparatus, which last at least for 30 combustions, if not much more; and (3) the great ease with which the method can be acquired by workers familiar with the macro-combustion. Seven to ten days' practice is entirely sufficient for this purpose.

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SPECIAL ARTICLES

BASIN RANGE STRUCTURE AT JEROME, ARIZONA

ON a recent trip to Jerome, I was impressed, as on a much earlier visit, with the superb outlook from that town, when viewed with geological eyes, and was led to wonder why neither I nor apparently any one else had particularly called attention to the bearing of the structure, here so grandly displayed, on the problem of the origin of the Basin Ranges.

Jerome lies on the steep eastern front of a considerable mountain mass, known as the Black Hills, and overlooks to the east the Verde Valley. The town is roughly 2,000 feet higher than the Verde and nearly as great a distance below the summit of the Black Hills.

The geology of the district has been well worked out by Dr. L. E. Reber, geologist for the United Verde Copper Company, and those who wish may readily consult his paper.[1] For present purposes it is sufficient to state that at Jerome pre-Cambrian crystalline rocks are unconformably overlain by nearly horizontal Paleozoic beds with a total maximum thickness of about 1,500 feet. These in turn are overlain unconformably by basaltic flows of late Tertiary age, which still have a thickness of about 700 feet on the Black Hills, west of Jerome.

The outstanding structural feature of the district, as has been recognized by many, is a great normal fault which has a general north-northwest strike and outcrops along the eastern face of the Black Hills. The town of Jerome is situated on this fault and the major effects of the dislocation are plainly visible on the surface and in the mine workings. It is clear that the rocks east of the fissure have gone down relatively to those west of the fissure and that the throw is approximately 1,600 feet. North of Jerome, some of the same late Tertiary basalt that caps the Black Hills can be seen faulted down against

[1] Reber, L. E., Jr., "Geology and ore deposits of Jerome district," Trans. Am. Inst. Min. and Met. Eng., Vol. 66, pp. 3–26, 1922.