more lasting than the transitory initial pupillary constriction, and for this reason I said in my brief notes that the mammalian pupil shows "chiefly" dilatation during asphyxia.

From the above it will be seen that there was no occasion for the surprise nor the original communication of Drs. Guthrie, Guthrie and Ryan.

JOHN AUER

THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH

FREE PUBLIC MUSEUMS

IN an interesting note in the February 11, 1910, copy of SCIENCE, Mr. Baker calls attention to the commendable policy of the Chicago Academy of Sciences, while commenting on Mr. Ward's statement of the liberal practise at the Milwaukee Public Museum, of having its museum open freely to the public, and shows that while the Milwaukee institution has been free to the public since 1905, the Chicago Academy of Sciences has been following that plan since 1894.

The Illinois State Museum of Natural History has been accessible to the public without charge for the last half century, thus preceding the afore-mentioned museums in this good work by many years. It now remains to hear from some museum which has been free to the public for a century.

Doubtless the time is speedily approaching when museums will be as free and as accessible as our libraries. The hours during which museums are commonly open, from nine to five, should doubtless be extended in order that working people might be accommodated. With the disappearance of the candle light period there is no insurmountable obstacle toward making the museums as attractive during the evening hours as during the day time.

The Illinois State Museum is visited possibly more largely by the people from the surrounding villages and towns than by the citizens of Springfield. Previous to the last four months the number of visitors were simply estimated, but during the last three months count has been kept and the number has averaged about 1,500 monthly. The highest attendance was recorded during the first week in last October, when within five days 11,866 people visited the museum.

When the state properly cares for this institution which has had so long and useful a history, and which has a mission of untold value to perform, it will be extensively patronized and amply justify the expenditure necessary to make it one of the most valuable of the free public institutions in the state.

A. R. CROOK

FACTS VS. THE ADVANCEMENT OF SCIENCE

IN his vice-presidential address before Section L, Professor Dewey took as his text the failure of science teaching to fulfill the prophecies of its priests; and he referred this failure to the custom of teaching science as information rather than as that method of using the mind which is necessary for the manufacture of knowledge. Both elements are essential parts of science; it is, however, important that we keep clearly in mind which aspect we mean when we speak of science-teaching, or of the advancement of science.

We all know that there can be no true science that does not rest solidly upon facts. But the thought must often occur to many of us that there is some danger, especially among the younger scientists, that we may become obsessed with an exaggerated sense of the value of facts as such. Is there not too much emphasis laid by many professors in charge of research students on the mere accumulation of observational, statistical or experimental facts, with too little attention to that side of science which concerns itself with those analytical and synthetic processes that convert facts into valuable ideas? It seems to me that this latter kind of work needs at the present time at least as much encouragement as the other. Of course, there is the possibility for "thinking" to degenerate into profitless speculation; but we are certainly as much in need of the results of thinking about the facts already accumulated as we are of more facts.

It was especially noticeable at the meeting of the association that the younger men pre-

sented facts to the various sections, while the older men gave a larger share of their attention to the analysis of facts accumulated by others, combining results from various sources for the bracing or demolishing of hypotheses. It may be claimed that the right to speculate has been earned by the professors through years of hard work, and it is true that judgment comes with years. But the question occurs to me whether what may after all be a rarer kind of ability is not unduly discriminated against by the custom of demanding of all candidates for higher degrees in science "contributions" that are essentially accumulations of new data. Do we not need to recognize that there are at least possible "contributions" of value for the advancement of science that do not consist chiefly of new facts?

Benj. C. Gruenberg
DeWitt Clinton High School,
New York
January 1, 1910

WHY PAWLOW?

To the Editor of Science: In the interesting address of Professor Howell's published in Science of January 21, 1910, I note a reference to the work of "Pawlow" on enterokinase. Perhaps it is too late in the day to protest against this spelling, but it seems to the writer that even should our physiologists concede their science to be "made in Germany," certainly our language is not. There are certain obvious rules for the transliteration of Russian names that have been in effect since such transliteration began to be done. But of late there appears to be a tendency to ape the Germans in this regard. Vladivostok now masquerades on many maps as Wladivostok. But if Pawlow, why not "Saratow," or "Orlow" or "Trepow" or "Popow"? Even *Minerva* which no one ever accused of being un-Teutonic in its make-up, uses the spelling Pavlov throughout. What reader of contemporary history would recognize the name of the famous Russian diplomat, Pavloff, if he read that one Pawlow was some time minister to Korea? Surely our orthography is bewildering enough as it stands without wantonly importing foreign absurdities into it.

J. F. Abbott

THE NORWOOD "METEORITE"

To the Editor of Science: Professor Very in his second article on the Norwood "meteorite" (Science, March 18, 1910, pp. 415–418) states that I helped him identify some of the minerals in thin section. I did identify the minerals, but, as is apparent to any petrographer, I am in no way guilty of the extinction angles recorded by Professor Very, or of the novel method of determining the composition of the feldspar. The feldspar is labradorite, but I did not attempt to find its exact composition.

G. F. Loughlin

SCIENTIFIC BOOKS

Die Bienen Afrikas nach dem Stande unserer heutigen Kenntnisse. Von Dr. H. Friese. Zoologische und Anthropologische Ergebnisse einer Forschungsreise im westlichen und zentralen Südafrika ausgeführt in den Jahren 1903–1905, mit Unterstützung der Kgl. Preuss. Akad. d. Wiss. zu Berlin von Dr. Leonhard Schultze. 2 Bd. 475 pp., 2 pll., 19 charts and 1 text. fig. Jena, Gustav Fischer. 1909.

In this monograph the noted melittologist, Dr. H. Friese, has brought together practically all that is known concerning the Ethiopian apifauna. The region covered is Africa south of a line drawn from Senegal to Abyssinia. In all, 777 species of bees are enumerated from this vast area. Fifty-three of these are described for the first time, and of the remainder the original descriptions are reproduced. The introductory portion of the work will interest the student of geographical distribution, since it contains a number of maps showing the ranges of some of the more characteristic genera of bees, both in Africa and in other parts of the world. The bees of Madagascar are not considered, because they are mostly of peculiar genera and have been adequately described by H. de Saussure in his