you per Alfred Capt. Felt, and another opportunity offering for Salem I cannot help entreating you again to have the goodness to comply with my request of collecting and sending me some of your most curious plants and particularly such I have pointed out in my former letters, the numerous opportunities from Salem and Boston to this place will afford you every facility in forwarding me same.

I am still expecting to hear from you if you got the plants I left for you at Francis Hotel and how you like them. If you have an European Herbarium or wish to make one I am ready to forward you specimens of the finest and nicest Italian and Sicilian plants in return from those I expect from you and beg you will command in everything else in my power.

Please to remember also to forward me Suplt. you promised me of the plants you have found in your Northern States since the publication of your paper in the American Academy Transactions.

I would entreat you to include in the plants you may send me, particularly those belonging to the tribe of Orchidean, Graminean, Calamariæ, Muci, Algæ, etc., as they are particularly interesting to me and I know you have well determined a number of them through Dr. Muhlenberg's means.

I should like to know the botanical names of all your Cherries, Vacciniums, etc., or a sketch of their descriptions (since you only mentioned their vulgar name in said paper) to enable me to discover it if you cannot send them in nature with the fruits or flowers.

I am most sincerely and with the most grateful wishes,

Dear Sir,

Your most obedient servant,

C. S. Rafinesque,
Care Mr. Bibbs Conpit,
Un Admer.
Palermo.

Dr. Manasseh Cutler,
Hamilton,
Near Salem,
Massachusetts.

favored by Mr.
Th. Bancroft.

'NODULES' IN COLORED BLOOD CORPUSCLES.

'Nodules' in mammalian colored corpuscles, such as those referred to by Professor Macloskie, were described by Mr. Victor Horsley, of London, in an address delivered on May 4, 1897, at a meeting of the 'Arztlicher Verein' at Hamburg. He did not, however, observe them in all the corpuscles, but only in some. In his paper, published, I think, in one of the volumes of collected papers from the Physiological Laboratory of University College, London, he mentions that Arndt saw granules in the red corpuscles which stained with methyl violet. Horsley's own observations were made by the intra vitam methylene blue method. In connection with my work on haemolysis, carried on during the past five years, I have had frequent opportunity to observe that when methylene blue is added to blood laked in various ways, blue granules generally situated eccentrically are revealed in some of the ghosts. G. N. Stewart.

A MUD SHOWER.

To the Editor of Science: On Saturday, April 12, at noon there occurred what has aptly been called a 'mud shower.' Collars and shirt fronts were spattered with dirt. It lasted only a few minutes, but was sufficiently unpleasant to create considerable discomfort. Window glasses on the western exposure of houses were covered with thousands of drops of dirty water. An examination of these drops with a simple microscope showed what appeared to be little membranous bags containing grains of dust. The dust particles were black with occasional instances of yellow and a few of red. The atmosphere at the time of the shower, and before, contained considerable dust. This phenomenon seems to give a striking confirmation of the dust-nuclear theory of the formation of rain drops. J. W. Moore.

Lafayette College,
Easton, Pa.

THE 'PRICKLY PEAR.'

To the Editor of Science: On page 598, issue of April 11, 1902, is printed the item that the Government of Queenland has offered a reward of $25,000 for the invention of some satisfactory means of destroying the 'prickly

pear.' If this refers to the common Missouri cactus, would it not be well to follow the Mexican in making it a useful food for cattle and sheep, by cutting the plant to the ground, and throwing it on piles of dry brush, which are fired, and the spines scorched off, when it is greatly relished by the stock.

CHARLES H. STERNBERG.

LAWRENCE, KANSAS.

THE SONG OF BIRDS.

TO THE EDITOR OF SCIENCE: Some time ago Mr. W. E. D. Scott contributed to SCIENCE an article upon the song of birds, drawing the conclusion that when isolated from their kind birds would originate a song.

In the building in which my office is located there is a canary that was taken from its parent bird when quite young, and grew to adult age entirely isolated from other birds. It has developed a song of its own made up, as nearly as I can distinguish, of but three tones sung as a phrase of seven notes. While the song suggests that of the ordinary canary it is not, I would say, actually any part of it; it is sometimes used singly, though generally repeated several times, and there is little if any variation from the original phrase or form.

WALTER S. KELLEY.

THE CONGER EEL.

TO THE EDITOR OF SCIENCE: The U. S. National Museum has recently received from the New York Aquarium a specimen of the larval form of the conger eel, which was captured in Gravesend Bay, N. Y. It measures four inches in length and is in a good state of preservation. Another specimen recently sent to the Aquarium was taken on the New Jersey coast.

Although the adult conger eel is common in New York waters, the *Leptocephalus* form has been recorded but rarely. Brevoort recorded its occurrence in the vicinity of New York City many years ago.

BARTON A. BEAN.

U. S. NATIONAL MUSEUM,
WASHINGTON, D. C.,
April 25, 1902.

CORRESPONDENCE OF THE LATE PROFESSOR LEIDY.

TO THE EDITOR OF SCIENCE: The undersigned has been collecting for some time the correspondence of the late Professor Joseph Leidy. Before the same is published, he would be indebted for any such which may be in the possession of the readers of SCIENCE. Care will be taken to return the originals if requested. Kindly address,

DR. JOSEPH LEIDY.

1319 LOCUST STREET,
PHILADELPHIA, PA.,
April 21, 1902.

SHORTER ARTICLES.

THE HYDROLYSIS AND SYNTHESIS OF ETHYL BUTYRATE BY PLATINUM BLACK.

KASTLE and Lowenhart have shown that the catalytic action of the enzyme lipase is reversible, *i. e.*, that it accelerates not only hydrolysis of fats into fatty acid and alcohol, but also the synthesis of fats from fatty acids and alcohol (*Chemical News*, February 8, 1901–March 15, 1901).

In an investigation on the action of enzymes which I began over a year ago at the suggestion of Professor Loeb, it occurred to us to try experiments with platinum black as the active principle in place of lipase.

I found that platinum black acts quite comparably to lipase. Platinum black hydrolyzes ethyl butyrate as well as synthesizes it from butyric acid and ethyl alcohol.

In my experiments the following chief facts were found:

1. Platinum black hydrolyzes ethyl butyrate, as is shown by the constant and definite increase in the acidity of the solution.

2. The velocity of the action is a function of temperature, *i. e.*, an increase in temperature from 0°C. to 40°C. is accompanied by a correspondingly increased hydrolysis.

3. The velocity of the reaction is a function of the quantity of the platinum black used; but independent of the quantity of ethyl butyrate used.

4. Platinum black synthesizes butyric acid and ethyl alcohol into ethyl butyrate. The odor of ethyl butyrate appears in a short time and increases with the increase in time.