which may contain further refutations. Madame Blavatsky herself appends to the pamphlet a brief and indignant denial of the grave charges which have been made against her.

— The success of the U. S. fish commission has caused complaints in England of the negligence of that government in matters pertaining to the fishing interests. The *Athenaeum* states that at the present moment there is not in the three kingdoms one scientific naturalist employed by the government to whom it has the right to apply for information on fishery questions. It is now said to be the intention of the government, however, to form a new fisheries board or commission.

— Caustic lime, ground fine, and consolidated by a pressure of forty tons into cartridges two inches and a half in diameter, is used in some collieries for getting coal, where gunpowder would be dangerous. After the holes are drilled in the face of the coal, an iron tube half an inch in diameter, with a small groove externally on the upper side, and several perforations, is inserted the whole length of the hole. The cartridges, which have a groove to fit the tube, are then inserted and lightly rammed, and the hole tamped. A small force-pump injects through the tube a quantity of water equal in bulk to the lime. The water escapes through the perforations and along the groove, saturating the whole, and driving out the air. The tube is then closed by a tap to prevent the escape of the steam, which, by its force, cracks the coal away from the roof, and then follows the expansion of the lime.

— A system of irrigation is on trial in Colorado, in which the water is conducted through pipes, laid a little below the surface several feet apart, and having small holes at intervals on the upper side to permit of the escape of the water, which percolates through and thoroughly moistens the soil. The advantages are claimed, that the surface of the soil is not chilled by flooding, and that the ground is not subsequently baked by the hot sun.

LETTERS TO THE EDITOR.

**** Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

Phylloxera.

WHAT evidence have we on the following points in regard to phylloxera? —

First, was it well known as a pest in this country before its introduction abroad?

Second, when and how did it reach Europe?

Third, why is it more injurious in Europe than in its native habitat? and

Fourth, is there any reason to suppose that the pest will be mitigated by natural causes as time goes on?

A. M. D.

New York, March 29.

Certain questions relating to national endowment of research in this country, and their importance.

I have read with interest Dr. Shufeldt's arguments in *Science*, favoring endowment of research, and the recognition on the part of the government "of those persons in her employ who have from time to time demonstrated their fitness to perform certain work," but I would like to ask the talented author why he would restrict this recognition to those in the government's employ, or why, indeed, there should be any distinction made between such men and other able men in civil life. The physician who finds that he is far better qualified for some other pursuit than that of medicine gives up his profession, and accepts a position where his talents can be better applied. Is not the same resource left for army officers? Dr. Shufeldt will hardly claim a monopoly of talent in government employ; then why are not the many struggling students of science in civil life who have shown evidence of their fitness to perform certain work equally entitled to recognition? By all means, if such a scheme is feasible, endow or assist original research, but put all citizens absolutely on the same level. While one may sympathize with the talented officers who are compelled to undergo wearisome drudgery not akin to their tastes or inclination, it cannot be forgotten that there are many other equally talented scientific men who have to struggle without even the assurance of a comfortable salary. Endow research, but let the endowment be impartial.

W. S. N.

New Haven, Conn., March 27.

The anachronisms of pictures.

Supplementing your recent publications touching the above-named subject, an example interesting to geographical botanists may be recorded among the existing curiosities of the national capitol.

The senate committee in charge of the fine arts has secured a picture representing a well-known incident in the life of Columbus, that occurred in old Spain anterior to the discoverer's first trans-Atlantic voyage. This picture is hung at the head of the marble stairway near the seats reserved in the senate hall for the ambassadors of foreign powers. It proclaims to the world that the plant (the Opuntia [cactus of Linneus] ficus indica, or prickly pear) which has figured in Mexican patriotic symbolism from time out of mind, and which holds the most prominent place in the oldest of Aztec legends, — the plant which Mexico regenerate has chosen as an emblem sanctified by association and antiquity, and has placed upon her banner and her dollar, — this senatorial picture proclaims that this cactus, so dear to the patriotic Mexican heart, is not originally Mexican, but that it was a possession of the usurper, and in pre-Columbian times grew by the dusty wayside in old Spain. That it had not reached Europe at the date of the incident represented in the picture, there can be no doubt.

I would refer the student to Alfonse de Candolle's work, 'Origin of cultivated plants' (*Appleton*, 1885), p. 275. Speaking of the Opuntia ficus indica, the eminent botanist says, "It was one of the first plants which the Spaniards introduced into the old world, both into Europe and Asia. Its singular appearance was the more striking that no other species belonging

to the family had before been seen." Should the student wish to investigate still further, he will find in de Candolle's treatise the names of several Spanish and other authorities. NOPAL.

New York, March 29.

Schwatka's Along Alaska's great river.

The author of the review of Schwatka's work on the Yukon (p. 294) is evidently ill-informed as to the history and present state of the mapping of that river, when he states that Raymond 'surveyed' it from Fort Yukon to its mouth, and supposes that the map of Raymond is the 'best in existence' of the lower Yukon. It is probable that he derives his impression from Schwatka's work; that gentleman, like many military men, preferring to ignore or affect contempt of any work done outside of military circles. The fact is, that Raymond's map has at present merely an historical value, and was originally merely one step in the many by which an approximate sketch of the course of that great stream has been arrived at. The first explorations were by the Russians, and are summarized in the map of Zogoskin, which, for the part included in it (except at the mouth of the river), has not been materially changed by any one, though positions have been better determined, and details added or subtracted. The river between the end of the Zogoskin map and Fort Yukon, and the delta, were mapped by the Western union telegraph expedition, whose work as to detail is fuller than any thing subsequent. They also sketched the upper river, but it was reserved for Raymond to correct the astronomical positions of important points, and thus modify the general course; to Schwatka and Krause, to furnish better details of the Lewis branch and head waters; to Nelson, to do the same for the delta, and Lieutenant Allen for the Tananah watershed. The credit due to each cannot be monopolized by any man or set of men, and it does not impair any man's reputation to do justly by his forerunners.

WM. H. DALL.

Smithsonian institution,
March 27.

A swindler abroad again.

Please give place to an advertisement of a fraud who has just left Oskaloosa. He came on the 6th, remained six days, and left without having caused sufficient suspicion for any one to say any thing. He professes to be Prof. Henry S. Williams of Cornell university, N. Y., a captain on the retired list of the U. S. army, — retired for disabilities resulting from wounds received from the Indians three days after General Custer fell. He is now representing the Smithsonian institution as a sort of an examiner, looking after books and specimens deposited at different places. He also represents that Cornell has a fund which makes it possible for them to sell for fifty dollars a set of fossils equal to sets sold by Ward for eight hundred and fifty dollars, and that they only want five dollars cash to pay for boxing and labelling, the remainder to be paid from time to time in local fossils, for which reasonable prices will be allowed. He contracted two sets here, but received the five dollars on but one of them.

He is about five feet eight inches high, weighs about one hundred and forty pounds, carries his right arm as though stiff, wears a glove on that hand, has light-brown straight hair, mustache, blue eyes, a large head with prominent forehead, so that his eyes seem a little sunken, and uses tobacco and whiskey tolerably freely for a professional man. We *know* he has a whole right arm and hand, and it is quite possible nothing is the matter with it. He talks very freely and accurately of fossils, books, and men, can give minute details of events in Indian warfare of ten and more years ago, which some of our citizens know to be literally true. He spends his money very freely, and seems to have plenty of it.

There is a general feeling that he worked some one for one hundred and eighty dollars, but, if so, whoever it was will not tell it. The amount is indicated, because it is rumored he draws one hundred and eighty dollars per month from the army. I cannot find who started it. If he has not done so, he certainly missed a good chance. A despatch from Humboldt to the Des Moines *Register* says he has been there and got about one hundred dollars.

ERASMUS HAWORTH.

Penn college, Oskaloosa, Io.,
March 24.

Bancroft's History of Alaska.

In your review of Bancroft's 'Alaska,' published yesterday, you speak of the transfer of that region, and the surrender of the despotic sway of the Russian American company, only to be renewed by one of our own, or, to use your words, "while the monopoly which succeeded, though more confined in scope than that of the Russian company, does not differ in its essential details, and is still in operation."

The entire area of Alaska is to-day, and has been since the purchase, open and free to all comers, in so far as the fur-trade is concerned, with the single exception of that reservation of the government for the protection of the seal-life on the Pribylov Islands, in Bering Sea: these small islets are completely isolated, and far removed from contact with the trade of that region, and are practically unknown to everybody outside of their narrow limits, except the officers of the government and the employees of the A. C. Co.

Competing traders are found at every little post in Alaska to-day where the fur-trade will warrant the establishment of the smallest trader and his outfit. There never has been the slightest interference with the prosecution of the fur-trade in Alaska since 1867 by any monopoly whatsoever.

HENRY W. ELLIOTT.

Smithsonian institution, March 27.

[The statements of the above letter, in so far as they are accurate, are theoretically true: the statement of the reviewer, in his judgment, better represents the social and commercial facts, as regards the whole territory, except the small area about Sitka.— REV.]

Names of the Canadian Rocky Mountain peaks.

An error in my article, printed in *Science*, vii. No. 162, is kindly pointed out by Dr. George M. Dawson of the Canadian geological survey, which I am glad to correct for your readers. Dr. Dawson tells me that the peaks of the Rocky Mountains, Hooker, Balfour, Brown, etc., were not named by the botanist Douglas, as I stated, but by Dr. Hector, now in charge of the geological survey of New Zealand, who in 1857–59 was attached to Captain Palliser's expedition into the north-west. ERNEST INGERSOLL.

New Haven, March 25.