without difficulty, and those most interested in the route by Hudson Bay to Europe for the wheat of Manitoba, are enthusiastic in their assertions that this proves the practicability of the route. A sober second thought, however, would indicate that, as far as yet made public, absolutely nothing new has been learned on the voyage of the Alert. The character of the navigation of Hudson Bay, a great shoal inlet, with its bottom dotted with stupendous bowlders often rising nearly to the surface; with no good port in the southwest, where, at the best anchorage, the vessel lies eight or nine miles from what must be the shipping point, permanent piers of any length being out of the question, owing to the movements of the ice; a strictly arctic climate, constant mirage, and no charts of any value: these incidents of the plan do not seem to be affected by anything done on the voyage as far as yet known.

USE AND ABUSE OF LEARNED SOCIETIES.

EVERY country thinks, doubtless, when it looks at the peculiar way in which things are done in other countries, that it could devise a method of much more dignity and wisdom for carrying out its purposes. We may certainly be excused for thinking that the plans by which great men are selected in both England and France might be improved upon. The familiar story of the candidate for the fortieth arm-chair of the French academy going about and soliciting the votes of thirty-nine immortals, never fails to give one an unpleasant shock at every fresh hearing. Even our presidential candidates are considered to be deficient in dignity when they make public speeches in their own behalf, and the literary man is supposed to be a man of much more delicate feeling than any politician. Nor is the English way of granting admission into the Royal society at all to be preferred; to hold an actual competitive examination, on the result of which a certain number of successful candidates are annually chosen, is not to show deference to the feelings of the candidate any more than the French have done.

There is a simple principle that should guide the bestowal of honors,—it is that they should be given and not sought. In private life a man is not expected to press his merits or his company upon his friends. We should consider it a barbarous social etiquette in which a person was required to call upon all his acquaintances and beg to be invited to their choicest dinners. If rewards are to be given at all for distinction in science or in letters, they should be given freely, and not be made bitter by conditions to which a gentleman has never before been obliged to submit. It may be a difficult matter to make the proper choice, but, at least, it should be made without the assistance of the candidate himself.

The English method has the additional disadvantage that it does not secure the men whom it is most desirable to honor. During the school-boy period, the distinction between different individuals is a distinction of learning, and an examination is not unfitted to discover the boy who deserves reward. But learning is not the quality which a state needs to make it great. Casaubons are not the kind of men who have built up English science. The qualities which ought to be encouraged, and which it should be a nation's delight to honor, are qualities too subtle to be detected by a competitive examination. That is a way of dealing out honors which, as Professor Chrystal has just said before the British association, belongs to the pupillary age both of men and of nations.

In our own national academy, whose tender age forbids as yet the lustre that clings to the ancient institutions of the European capitals, the only knowledge a man may have that he is a candidate for election is through the imprudence of his friends among the academicians,—an imprudence which is unhappily too common. Indeed it is becoming evident to many that the candidate active in pushing his own claims, in however secret a manner, is *pro tanto* lessening his chances of admission. And this is as it should be; merit in the eyes of others should be the single test.

THE RECENT EDUCATIONAL MEETING IN BOSTON.

THE educational conference, which met on Friday and Saturday, Oct. 16 and 17, at the Boston Latin school, was one of the most notable ever held in America, by reason of the representative character of the delegates, the nature of the topics discussed, and the possible effect upon our higher education of the movement there inaugurated.

The teachers of the preparatory schools have for some time been conscious of certain difficulties arising from the lack of a proper understanding on their part of what the colleges really desire of them, and particularly as regards the requisitions for admission to college, in the determination of which, they, however interested parties, have never been recognized as having a voice. Addi-

tional subjects have been added from time to time to the requirements, additional quantities also in the traditional subjects, while each college has more or less contributed to the diversity of the programme submitted to the preparatory schools.

Those unsatisfactory relations were the subject of a very frank discussion at the meeting of the Massachusetts classical and high school teachers association in 1884. Resolutions were passed setting forth the desirability of a meeting of delegates of that body with representatives of the New England colleges to consider matters of common interest, and at the following meeting, in April, 1885, a committee was appointed to make arrangements for such a conference.

The response of the colleges was most cordial, as may be inferred from the fact that fourteen colleges were represented at the recent meeting, and eleven of these by their presidents. Nearly every one of the leading academies which fit for college, as well as many of the public high schools of the larger New England cities and towns, were also represented by their principals.

The programme of the meeting involved the presentation of only four papers, with a discussion of each. Two of these were prepared by persons connected with colleges and two by preparatory teachers, and in each instance the discussion was opened by a delegate representing the alternate interest. From the side of the colleges, President Porter of Yale spoke on the question, 'How can the preparatory schools coöperate more effectively with the colleges?' and Professor Fay of Tufts college had prepared an answer to the query, 'What are some of the most prominent and prevailing defects in the preparation of candidates for college?' the material cited in evidence being collated from nine leading colleges. The questions, 'Is any greater degree of uniformity in the requisitions for admission to college practicable?' and, 'Under what conditions might admission to college by certificate be permitted?' were treated respectively by Principal Bancroft, of Phillips academy, Andover, and Dr. Robert P. Keep of the Free academy, Norwich, Conn., while the discussions on these topics were opened by President Eliot of Harvard and President Robinson of Brown university.

The papers were characterized by the completest frankness, and the evils which stand in the way of a consistent, consecutive, and honest national system of education, were unflinchingly faced. The representatives of the colleges were given a clear understanding of the practical difficulties they created for the fitting schools, while the teachers of those schools learned, perhaps for the first time, just how the products of their efforts are regarded by the college professors, into whose hands they are committed for a continuance of the work begun by them. The showing was anything but gratifying to our national vanity, for the fact was not overlooked that the colleges find it hardly possible to correct the careless or lazy intellectual habits contracted in the preparatory schools. On the other hand, the colleges were held responsible for the larger part of the evil, owing to the excessive burden put by them upon the schools. The traditional absurdity of setting quantity above quality in the requirements for admission to college was boldly criticised, and hopes were expressed that some plan, that will prove satisfactory to all parties, may yet be devised for admission of students upon the certificate of competent teachers that they are prepared to pursue a collegiate course with profit.

If any came to the meeting skeptical as to any practical results of a conference of two classes of teachers, whose work, however naturally a unit, has thus far been conducted in entire independence, the one part of the other, he must have been happily disappointed. When one considers the staleness of the subjects usually treated at educational meetings, the threshing of old straw, and the half-dreariness of the interest manifested in many cases by the leaders, the freshness and enthusiasm of the conference were something worthy of especial comment. While to the college men certain of the subjects were perhaps commonplace, they came with a degree of freshness to the teachers of the schools; and so, on the other hand, it was something quite new for the presidents and professors to hear clearly voiced the sentiments of the preparatory teachers, of which they had heard only vague echoes. Hence, when the programme of papers and discussions was ended, the conference, with an eager unanimity, resolved itself into a permanent organization, to be known as the 'New England association of colleges and preparatory schools.'

The first practical result of the conference was the passage of the following resolutions with regard to uniformity of requisitions:

First,—Resolved, That this conference of college presidents, principals and teachers in preparatory schools, earnestly appeals to the colleges for concerted action on their part in order to secure uniform requisitions in all subjects and authors in which they have a common requirement.

Second,—Resolved, That this conference urge upon the colleges a still closer agreement on their part as to the subjects to be set for examination, the recommendations to be made to the schools, and the nature and extent of the entrance examinations.

Third,—Resolved, That this conference request the colleges to make reasonable announcement of any changes in the requirements for admission.

Fourth,—Resolved, That this conference request the colleges to unite in prescribing definitely the subjects which may be offered at the partial or preliminary examinations, the minimum number for which a certificate will be given, and to decide whether a final examination may be converted in any case into a preliminary examination, or a preliminary examination into a final examination, and if so, on what terms.

Fifth,—Resolved, That this conference urge upon the colleges coöperation and comity, either in accepting each other's certificates of examination, or in establishing jointly an examining board, whose duty it shall be to set papers, conduct examinations, and issue certificates on their behalf, which certificates shall be good in any college in the syndicate.

Naturally the public at large is not so directly interested in this particular subject of uniform requisitions as the preparatory teachers, but certain cognate topics of a general interest cannot fail to be considered in connection with this matter. First of all, and of the greatest importance in view of the very bad state of affairs shown by the paper upon prominent and prevailing defects in the preparation of candidates for college, the relative value of a thorough grounding in the elements of each of the subjects on which the candidate is required to be examined, as compared with the present superficial attempt to perform an excessive stint, cannot fail to be considered. Science cannot fail to derive a direct advantage from a change for the better in this particular. If, as it appears, inaccuracy and lack of intellectual independence are the striking defects noticeable among college students, any reform which shall tend to do away with such unscientific, as well as unscholarly deficiencies, will be of benefit in increasing the number of educated men from whom science has something to hope.

AN ADVANCE IN FISH CULTURE.

NOTWITHSTANDING the successes of fish culture in replenishing the depleted waters of our Pacific slope with quinnat salmon, those of the great lakes with white-fish, and the rivers of the east with shad, little has resulted from the efforts to restore Salmo salar to its native haunts in New England, or to acclimate it in the Hudson, the Susquehanna or the Potomac. The introduction of the quinnat salmon into Atlantic waters has as yet not been accomplished, and the attempts toward this end must be classed as experimental, rather than actual fish culture. In an infant art like fish culture, the only road to success is through scientific experimentation, and it is the freedom with which tentative work has been done by the U. S. fish commission, which has placed American fish culture so far in advance of that of the old world.

Experimental fish culture has frequently led to practical results in a manner not at all anticipated; never, however, more strikingly than in the recent salmon work in the basin of the Hudson. In 1883, through the coöperation of the U. S. commission with one of the commissioners of the state of New York, 40,000 fry of salmon were brought from the Penobscot and placed in Clendon Brook, near Glens Falls, N. Y. The brook was placarded and policed, and this fall it is found to be alive with young salmon throughout its entire length. There are numerous fish just ready to be transformed from 'parrs' into 'smolts;' these are about six inches long, and will, doubtless, soon go out to sea to return in about three years as adult salmon. There are also numerous smaller fish, representing the 60,000 fry which were planted in the same stream last April. The larger ones take the fly with great eagerness.

Heretofore, in planting salmon, it has been customary to place the little fish in the streams and allow them to care for themselves, but the new idea of placing them in protected preserves, where they can be cared for by the people living near at hand, and their growth to the proper size assured, will, no doubt, revolutionize salmon culture.

A similar experiment has lately been made at the station of the U. S. fish commission at Wytheville, Va., where 30,000 California trout have been confined until they have become vigorous fish of half a foot in length; they will be used, instead of helpless fry just freed from the yolk sac, in stocking the Atlantic slope with this fine species.

The conclusion of the Clendon Brook experiment will be eagerly looked for, not only by anglers and economists, but by zoölogists generally, to whom the extension of the actual habitat of a large river fish, some three degrees to the southward, will be a matter of considerable interest.

THE FLOOD ROCK EXPLOSION FELT AT HARVARD COLLEGE.

AT a meeting of the American academy of arts and science, held in Boston, Oct. 10, Prof. W. A. Rogers, of the Harvard college observatory, gave an account of his observations to detect any trembling of the earth at the time of the Flood Rock explosion. Professor Rogers stated that at 11:17:30 by the chronometer a very decided commotion of the surface of the mercury was observed. About 15 seconds later the rumble of an ice wagon was heard at a distance of 1,000 or 1,300 feet from the observatory. From this instant the effects of the disturbance by the wagon and of the explosion were combined, but the disturbance