

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

waves from the latter cause were so greatly magnified beyond anything he had ever before observed that he thinks there can be no reasonable doubt of their reality as the result of the explosion. A second and still more violent commotion was observed 10 or 15 seconds later, and a third even greater disturbance occurred about the same length of time following the second. At 11:18:15 A. M., the entire surface of the mercury under the objective appeared to sway back and forth over a space certainly as great as one five hundredth of an inch. This action continued eight or ten seconds, and at the end of about 20 seconds there was almost an entire subsidence of the commotion. From this instant the recurring disturbances gradually diminished, and at 11:20 A. M. they had entirely ceased. At this time the ice wagon was directly opposite the observatory.

The waves of disturbance certainly increased in amplitude until 11:18:15 A. M., and gradually diminished after that time. The intervals between the waves appeared to be about 15 seconds, but attention was not withdrawn to the chronometer to be accurate as to this. Professor Rogers is not quite certain whether there were three or four waves preceding the one having the greatest amplitude. The direction of the waves as indicated by the movement of the spot reflected on the mercury surface, was certainly not due east and west, but rather about 15 degrees from the north and south line; that is, north of east and south of west. On the next following day, by prearrangement with the driver, an ice wagon was started from about opposite the observatory, to be driven rapidly away. Under these circumstances, only a very slight tremor of the mercury surface was visible, while the cart was traversing a distance of about 750 feet, after which the tremor ceased. The readings of the chronometer were corrected to give eastern time, as above stated.

SOCIAL PHILOSOPHY AND RELIGION OF COMTE.

THIS is one of the ablest works of the well-known author, and is a decidedly agreeable indication of the spirit just now prevalent in the better sort of philosophical discussion. When the British Hegelian movement began, a score of years ago, with Dr. Stirling's 'Secret of Hegel,' it was on its face an intolerant and exclusive movement. As popular English thought had no organ for understanding the master, and merely felt that Dr. Stirling had 'kept his secret,' so the Hegelian leader himself expressed a bitter contempt for popular English thought, and mutual advantage

The social philosophy and religion of Comte. By EDWARD CAIRD, L.L.D. New York, Macmillan, 1885.

for the disputants seemed hopeless. The new Hegelianism looked like a new patent plan of salvation, with nothing to offer save to the faithful. Younger Hegelians in the British universities, equally learned in their chosen field, but less vain of their skill, have changed in latter days this forbidding exclusiveness. They have seen that a doctrine which pretends to be universal, cannot possibly be content with a merely scholastic intolerance and formalism. They have felt that if Hegelianism is of universal significance for human thought, it can be so only in case universal human thought is already in its actual essence, Hegelian, however unconscious the natural man may be of his discipleship. A system is of one sort when it says: "I express what you heretics shall become ere you shall escape from your natural and utterly lost state;" and of quite another sort when it says: "I express what you, as genuine human thinkers, already in your thought unwittingly are and aim to be." Now if there is any truth essential to genuine Hegelianism, it is that this latter attitude is the correct one towards the thought of any active and sincerely progressive age like the present. The Hegelian system pretends to have meaning only for an actual concrete world, and loses sense whenever it is presented as a remote plan of a purely abstract and ideal world. And so the healthy effort of the younger British Hegelians to drop Dr. Stirling's 'head-boy' airs, to cease boasting of the skill required for seeing through the Hegelian mill-stone, and to tell us a straight story about what human thought is and does, is an effort of a most gratifying sort. To be sure, this effort must not be confounded with any debased 'popularizing' of philosophical study, such as should overcome difficulties only by keeping them below the horizon. The more recent British Hegelian books and articles are not very easy reading. But they have a most stimulating air of actuality about them, and if Prof. Caird is not always so robust and direct in speech as some of his fellows, he at least shows a very sincere effort to continue his studious progress earthwards; and we may hope that he will ere long reach his goal.

This undertaking then, to show not that human thought must needs put on the Spanish boots of any man's terminology, but that the Hegelian doctrine has expressed profound truths about the unconscious spirit, and about the true meaning and work of all sound natural thought, is exemplified by Prof. Caird in the volume before us, by an application of his method to a criticism of Auguste Comte. Comte is, one would have supposed, at the other pole from Hegel. One would be amused to imagine them, in Walter Savage Landor fashion, engaged in conversation, or, better,