

FURTHER appointments of Research Associates will be made at Battelle Memorial Institute, Columbus, Ohio. Young men who are college graduates and who have shown exceptional aptitude for research, either in graduate work or in a brief industrial experience, are eligible. Preference will be given to those who have majored in physics, physical chemistry, organic chemistry, chemical engineering, metallurgy, fuels or ceramics, and especially to those who have completed their Ph.D. training and who are planning a career in industrial research. An appointment as Research Associate is for one year, including vacation, and may be extended for a second year. The salary is \$1,800. Research Associates work full time on approved research projects under the supervision of the Battelle technical staff.

THE London *Times* states that the University of Edinburgh has established a Polish School of Medicine. This will be staffed by professors and teachers now serving with the Polish Army in Great Britain and by professors of the University Faculty of Medicine in such subjects as may not be represented among the Polish professors. A statement issued by the university reads in part: "The Polish Forces in this country include a considerable number of medical officers of whom many are men of high academic standing who have held important teaching and research appointments in Poland. In addition, there are other medical graduates of Polish universities who have lost for the present almost all opportunities of maintaining the standards of their professional skill. There are also numbers of Polish medical undergraduates in this country, and the value of their studies will be seriously affected unless something is done to mitigate the unfortunate situation in which these men now find themselves."

THE Dublin Institute for Advanced Studies was founded last October. According to *Nature*, it consists of two constituent schools, the School of Celtic Studies and the School of Theoretical Physics. The

institute will provide facilities for advanced studies and research in special branches of knowledge and for the publication of the results of such studies, irrespective of whether they have originated from the institute or not. Members of the governing board of the School of Theoretical Physics include Professors A. W. Conway, *chairman*; F. E. W. Hackett, A. J. M'Connell; W. H. McCrea, Belfast; A. O'Rahilly, Cork, and E. T. Whittaker, Edinburgh. The scope of the school is described as the investigation of the mathematical principles of natural philosophy and their application to the sciences in which they obtain. Both the training of advanced students in methods of original research and the provision of research facilities for professors and lecturers on leave of absence from their academic duties will be included. The first senior professor appointed to the school is Professor E. Schrödinger, formerly of the University of Graz.

T. H. VAN DEN HONERT, acting director of the Buitenzorg Botanic Gardens at Java, writes to SCIENCE: "The *Annales du Jardin botanique de Buitenzorg* up till now have been published at Leyden, Holland. As the European territory of the Kingdom of the Netherlands is now occupied by the enemy, a new series under the name of *Annals of the Botanic Gardens, Buitenzorg*, has been started in Java. This periodical will cover the whole field of pure botany, including plant physiology, morphology, anatomy, cytology, ecology and microbiology. It will contain contributions by the regular staff and visitors to the scientific institutes of the Botanic Gardens as well as from other sources. The editor's mailing list is, however, not available in Java. As it is intended to continue exchange as usual, it seems advisable to renew or confirm each exchange. The same holds for the subscriptions to the new series. The price per volume is fixed at fl. 10. Therefore, subscribers and others interested in this periodical are requested to communicate with the Director of the Botanic Gardens, Buitenzorg, Java, D.E.I."

DISCUSSION

THE MUSEUMS OF NEW YORK

IN a recent unasked-for report to the mayor of New York City the commissioner of parks takes it upon himself to submit a blanket adverse criticism of the museums, zoological park, aquarium, botanical gardens and public library of New York. It is proffered by one with no known experience in either sci-

ence or education. From correspondence and conversation with officials of these institutions it seems fairly evident that the criticism is based chiefly on the reports of others, for apparently the commissioner of parks, with possibly one or two exceptions, has not inspected these institutions in person since he came into office.

It is not only the museums as they stand that

are criticized, but the motives and the personal character and conduct of the founders and their successors, and the aims and ideals and organization of the museums. He finds almost everybody and everything inefficient, wasteful and wrong. The boards of trustees constitute a "House of Lords" or an "exclusive social club." Only those who are rich (especially the newly rich) and have "Society" status can qualify as board members. Ex-officio members of these boards—the mayor, the comptroller and the park commissioner—are not welcome to the meetings, and the boards resort to a cunning subterfuge to keep them outside the inner councils. "The greatest mistake a public official can make," says the report, "is to concede that there is something occult, esoteric or sacred about these institutions. This is, of course [*sic*], the atmosphere with which, in the past, the trustees have surrounded them."

In addition to the three ex-officio trustees, there should be "a third class consisting of a minority appointed for overlapping terms by the Mayor," apparently to keep careful watch to see that proper standards are set and realized, and in particular to see that the museums are organized with reference to the mental and cultural requirements of "the average roughneck outside," rather than those of the "comparatively few really cultivated people" who visit them.

The priceless treasures of objects of art and science that constitute the exhibits are referred to as "the loot" contributed by "new millionaires" determined to make a public exhibition of their wealth.

The report also shows considerable ignorance, for a trustee, as to what institutions in the city have any official relations to the city, for such institutions as the New York Historical Society, the Museum of the American Indian, Heye Foundation, the Brooklyn "Institute at the Academy of Music," are treated like the Metropolitan and the American Museums, although they are located on their own property and are supported wholly from private funds.

The trustees of the various institutions are treating the report as it deserves to be treated—with complete indifference and silence. But no one acquainted with municipal politics in American cities will fail to see in this report evidence of the danger which both trustees and city officials sought to guard against when the written agreements were entered into between the two bodies, namely, to take every reasonable precaution against the institutions falling into the hands of politicians, as ignorant as the writer of the report shows himself to be of the aims and purposes of a modern museum. Since the time when P. T. Barnum established in New York City his "Museum" of freaks and marvels the idea has persisted in certain quarters that the only function of a museum is to place exhibits on

view, suited chiefly to "the average roughneck outside."

A brief historical survey may not be untimely here. Some sixty or seventy years ago two groups of men, interested in the promotion of popular education and culture, organized themselves into two "boards of trustees" to initiate and develop, one, a museum of natural history, the other, a museum of art. One familiar with the cultural history of that period in America knows how great was the need for such institutions. In the length and breadth of our country there was nothing of the kind. Public schools there were, and colleges for the higher education of those who felt the need of it and could afford it, but no institution for the free dissemination among the people of the enjoyment and appreciation of the best in art, and the diffusion among adults and children of a knowledge of man and nature. No branch of our government—federal, state or municipal, had ever made the slightest move toward the establishment of institutions with such aims.

What are the requirements to make such institutions succeed? First, an interest in the public welfare; second, an interest in science or art as the case might be, and an understanding of the importance, in a democracy, of spreading this interest and knowledge among the people; and third, the possession of wealth and a disposition to use it for human betterment; for money is the indispensable prerequisite for the promotion of anything for the benefit of mankind. Even religion must be financed by some one.

When these two organizations were started each group sought to find others who would join with them in the enterprise, and two boards of trustees were built up. The sole aim was public service—the sole requirement for membership on the board was the ability to contribute strength of *some* sort—interest in the subject-matter, interest in popular education, interest to make New York City a better place to live in.

The importance of the work and its universal character made it essential to have the various groups of the community represented on the boards, and special care was taken to have Catholics, Protestants, Jews and other groups represented—as they now are. Some were chosen for their enthusiasm for science or art, some for their influence with possible sources of cooperation and support, some for their positions of trust in the community, some for their experience in education, some for their knowledge of finance, and always it was important, and always will be, to have some men of wealth and a tradition or disposition to use their wealth for public service. It was a characteristic movement of American democracy. How disregarding of all the facts to speak of any of these boards as "a House of Lords" or "an exclusive social

club" or to try to impugn or belittle the motives of the men. If *any one* has anything to contribute—of knowledge or ideals or funds—that will make our museums more interesting and more effective educationally, he would certainly be welcomed on any board.

And how the money has poured in! Millions of dollars freely contributed solely for the public welfare. The City of New York has never, if we are correctly informed, appropriated a penny for the purchase of any of the marvelous collections of objects of art and natural science on display every day of the year, in every city museum, free at all times to all visitors. The city provides the sites, buildings and maintenance—heat, light, upkeep of buildings and grounds as it properly should. In some cases it meets a portion of the cost of curatorial services, in some cases none. The exhibits are provided from private funds.

We sometimes wonder how many of the millions who visit these great public institutions every year ever stop to consider that they are indebted to some one for making such opportunities possible or who that "some one" is. It is high time that these facts were generally known and appreciated.

No sane person would, for a moment, contend that our museums, our botanical gardens, our zoos are perfect. The church is not perfect, banking is not perfect, business is not perfect, our schools and colleges are not perfect; they are all human institutions, and nothing human is perfect. But the fact remains that the American Museum of Natural History and the Metropolitan Museum of Art, not to mention the other institutions, are recognized by competent authorities, both here and abroad, as among the greatest and most effective institutions of their kind in the world. There is every evidence that the local public (the taxpayers) and out-of-town visitors are unanimous in this verdict.

It is the dual function of a museum to advance knowledge as well as to disseminate it. It would be wholly out of the range of possibilities to produce such an exhibit as, for example, the dinosaur hall in the Natural History Museum without a staff of creative scientists. The material could not be collected and installed merely by "popularizers." It must be authoritative or it would be worse than useless. Creation in science means research. It is distinctly not the purpose of museums to be merely purveyors of second-hand information. And every year their emphasis is more and more on popularization and public service while maintaining the highest standards of science and art.

Moreover, it should be kept in mind that our museums are not *exclusively* for "the average roughneck

outside," as Mr. Moses seems to imply. While they do not discharge their full function "if a comparatively few really cultivated people understand and visit them," nevertheless it is an important part of their obligation to serve the "comparatively few really cultivated people"; they certainly pay their share of the taxes. Educational standards are not raised by adjusting them to the mediocre, in museums any more than in colleges. It is the perpetual challenge of education to elevate the general intelligence, if possible.

Like the mayor and the comptroller, the park commissioner is *ex officio* a member of the board of every one of these semi-public institutions that is located on city-owned property. His status as such is no different from that of any other member of the board. He has not only the honor but the obligations and duties of a board member. If he sees opportunities to improve the museums the most direct and effective way to bring that about would be to attend a board meeting in person, outline the changes or innovations he thinks desirable, and have them freely discussed. He may rest assured that if such proposals are commendable and feasible they would be gladly adopted, not only by New York City museums, but by those in other cities as well.

MUSAEUS

THE ECR IS PROGRESSING

SINCE the notice of January 17 appeared in *SCIENCE* concerning the proposed Encyclopedia of Chemical Reactions more than fifty persons have volunteered to aid in the abstracting of the remaining chemical journals for the work. This response has been far beyond expectations.

In making a progress report I wish to state that at this time (February 22) there are 69 listed collaborators and abstractors for the ECR. In addition to these there are 18 volunteers who have not yet been given abstracting assignments, raising the total ECR personnel to 87. There are 147 chemical journals on our revised list to be covered. This list now contains all the journals that are likely to yield any inorganic chemical reactions in the modern sense. Out of this number forty-one journals have already been abstracted, and the reaction cards filed. Forty-three others have so far been assigned to abstractors, and are now being worked over.

If the 18 unassigned volunteers will each take one of the remaining journals we should still have 45 left, for which other abstractors will be needed. The journals yielding numerous reactions suitable for the ECR are comparatively few, but some of them are so long that it will require half a dozen or more abstractors for each set, in order not to make the work too tedious. On the other hand, some journals in related fields yield