the complete known data of every specimen received, the number 100,000 has been passed.

This collection is by far the most complete of any, in the representation of North-American birds and those of the West Indies; while, of South and Central American birds, only two collections — those of Dr. P. L. Sclater and Messrs. Salvin and Godman in England — excel it. These are superior in the number of species represented, but are decidedly inferior as regards the number of specimens; the aim of the museum being to acquire series which will illustrate the important subjects of geographical distribution and variation, thus furnishing material for those investigating the higher branches of the science. In Australian, Japanese, and European birds the collection is also tolerably complete; but of African, Asiatic, Indo-Malayan, and Polynesian species, there are still many important deficiencies. These, however, are being rapidly filled by exchange and otherwise, so that a fair collection of old-world birds is only a question of time. It may be explained, with regard to exotic birds, that the chief aim of the museum is to acquire representatives of, first, the higher groups not represented in the American fauna; second, genera and species allied to American forms; and, third, typical species of the more distinct genera within each family.

The extensive and unique collection of birds now possessed by the museum has grown from the private collection of Professor Baird, consisting of three thousand six hundred and ninety-six specimens, mostly collected, prepared, and labelled by Professor Baird and his brother, William M. Baird, from 1839 to 1851, but embracing also many, if not most, of the types of Audubon's works, presented to Professor Baird by Mr. Audubon. The catalogue of this collection, in Professor Baird's handwriting, forms volume i. of the museum registers of the bird-collection, which now comprises eighteen volumes, containing a full record of every specimen. In the case of specimens which are the parents of eggs collected, the museum register number of the latter is given in a particular column; while in the egg register the number of the parent, if in the collection, is given in a corresponding place.

The great bulk of this collection is in the form of unmounted skins, arranged in insect-tight drawers, the contents of which are, as far as practicable, marked on the outside; the arrangement being so systematic that any specimen in the entire collection can be readily found within five minutes of the time it is called for. The number of specimens in the mounted or exhibition collection is, for several reasons, necessarily small. In the first place, the cases available for their exhibition are in every way unsuitable, being old and badly constructed, admitting freely both dust and insects, thus rendering it a great risk to put valuable specimens inside of them. Were suitable cases provided, the number of specimens which the public could view might easily be increased from six thousand (the number, approximately, now on exhibition) to fifteen thousand or more, without materially weakening the 'study series,' or putting in the cases specimens of no interest to the general public.

Labels designed with special reference to the needs of the non-scientific public are being prepared for the mounted specimens, and will be attached to them as soon as possible.

Ornithologists will rejoice that Professor Baird has lived to see the gradual development of a grand national collection from the humble nucleus upon which it was built. The pleasant associations which his memory, no doubt, recalls, must be no less a source of happiness to him than the opportunity of witnessing the important and far-reaching results of his boyhood studies. All wish for him the satisfaction of realizing the consummation of the plans conceived during his maturer years, not the least of which, perhaps, may be the perfection of a national establishment for the study of natural history, which shall be alike attractive and instructive to the general public, and accessible to the special investigator, under the auspices of a government which should take pride in fostering and maintaining a natural-history museum such as no other country can boast.

As being more than any living person entitled to the privilege, specimens numbered 100,000 closing the first century of thousand, and 100,001 commencing the second, are entered as donations from Professor Baird. They were collected in 1850, and presented to Professor Baird by Mr. George N. Lawrence of New-York City, to whom belongs the honor of being the oldest active American ornithologist, and an associate of Professor Baird in his classical work on North-American birds published in 1858.

ROBERT RIDGWAY.

OVER-PRESSURE IN SCHOOLS.

THE subject of over-pressure in schools is being seriously agitated in many European states. In England the discussion just now is related to the report of Dr. Crichton-Browne upon over-pressure in the Board schools of London. This gentleman was invited by Mr. Mundella to examine the schools from his stand-point as a medical expert, and report his observations and conclusions as to the effect of the system upon the health of the scholars. As eventually issued by the education department, the report is accompanied by a memorandum from the pen of Mr. F. G. Fitch (one of her Majesty's inspectors), who severely criticises Dr. Browne's method of investigation, his arguments and conclusions. The press has entered upon the controversy with considerable ardor, so that over-pressure and Dr. Crichton-Browne are topics of the day.

The characteristic features of the English Board school system, the rigid arrangement of subjects and standards, the government inspection, the complicated scheme of examinations, and the payment by results, are unlike any thing that is known, or that would be tolerated, in America; nevertheless, the two systems have certain tendencies in common. In both, the animating impulse of the schools is derived

largely from the standard by which the results are periodically estimated, which standard is an *a priori* conception of the powers and capacities of the young. This is not the only, and possibly not the best, means of estimating a process of growth; but it is the only one encouraged under the English code, and the only one that is likely to be employed among us, so long as the majority of parents demand, not that their children shall grow, but that they shall overtake some one else's children in the race.

Wherever an artificial stimulus is employed, there will be over-pressure to a greater or less extent; and it is this fact which Dr. Crichton-Browne has brought out most effectively. The backward children, whom he judges to be incapable of accomplishing an ordinary year's work without undue strain, include the dull, the delicate, and the half-starved. In this country the last-named class are virtually outside the operation of the influences that produce over-pressure; but of dull and delicate children we have a full quota, and it is well for parents to consider the risk that attends the endeavor to force such to keep pace with those whom 'God has made full-limbed and tall.'

It is difficult to establish a relation between educational processes and vital statistics; but there is reason to infer the connection, whenever, as Dr. Browne expresses it, "diseases due to nervous conditions, identical with those that educational over-pressure sets up," are on the increase. That this is the case in England is shown, Dr. Browne believes, by the statistics of mortality from hydrocephalus, cephalitis, diabetes, and kindred diseases. Nor does he stop here. "We have signs," he says, "which can scarcely be misinterpreted, of the tendency of education, when not safe-guarded by physiological discretion, to overthrow mental equilibrium. Suicide, which is the crowning symptom of one type of insanity, has been spreading portentously during the last hundred years. A startling revival of it has occurred all over Europe; and the rate of suicide calculated on the entire population seems to have quintupled in the last century. It is," he says further, "an indisputable fact, that the revival of suicide in almost every country of Europe has coincided in time with the modern extension of education, and that suicides are now most numerous in the very regions where education is most widely diffused. The number of children under sixteen years of age in the list of suicides, although still comparatively small, is swelling annually; and the age at which the maximum number of suicides occurs in England has receded considerably in the last half-century, showing that the disposition to self-destruction arises now earlier in life than it was wont to do in former times."

Dr. Browne's personal investigations in the schools were directed to ascertaining the extent of headache, sleeplessness, neuralgia, etc., among school-children. It is sufficient to note the line of inquiry, without going into the tabulated results, more especially as the author admits that they are merely tentative.

Attention has already been drawn in the pages of *Science* to the action taken by several German states with reference to overwork in the Gymnasien and Realschulen. More recently, in accordance with the commands of the Prussian minister of instruction, a report on the subject has been prepared by the 'Royal scientific commission on medical affairs,' including Professors Virchow and Hofmann, and ten other members of almost equal note. The commissioners go into a detailed discussion of the observations submitted to them by the government, touching suicide and insanity among scholars, headache, bleeding at the nose, congestion of the brain, and general physical and mental weakness. In view of all the information attainable, they state "that the requisite data are wanting for a scientific estimate of the extent of over-pressure among the pupils in higher schools;" and they express the opinion, that, for the collection of such data, "the co-operation of competent medical men is indispensable." They do not, however, overlook the fact that there are many essential points involved in the inquiry, of which the teachers alone are the proper judges. The commissioners especially insist that teachers must not measure the strength of their scholars all by the same standard.

The agitation of the subject of over-pressure is not confined to England and Germany. Information reaches us that the minister of public instruction in France has reduced the hours of study in secondary schools. In Switzerland, where the evidences of over-pressure are startling, the cantonal governments are considering the best means of counteracting the evil. At the recent international medical congress, Copenhagen, Dr. Kjellberg of Upsala made a profound impression by his statements concerning the effect of study upon the health of children. The symptoms of excessive brain-work on the part of the young, which he had noticed, were headache, sleeplessness, intellectual torpor, muscular weakness, and spasm, culminating in hallucination, and often in sudden loss of consciousness.

Little or no effort has been made in the United States to collect data bearing upon the subject, but there is reason for supposing that over-pressure is not so common here as in countries where education is more highly developed. It would, however, be well for us to take warning in time, and seek to forestall such effects as those described by the various experts who have investigated the matter in Europe. We should be particularly cautious about advocating European systems of education before we have ascertained their ultimate effects.

NEW-ENGLAND ORCHIDS.

The orchids of New England: a popular monograph. By HENRY BALDWIN. New York, *Wiley*, 1884. 158 p., illustr. 8°.

LOVERS of flowers have always wondered at and admired the beauty and oddity of orchids, which are sure to form the most interesting