

better, raising men above vile things and worthless competitions, to a fuller life and keener enjoyments. Through it we believe that man will be saved from misery and degradation, not merely acquiring new material powers, but learning to use and to guide his life with understanding. Through science he will be freed from the fetters of superstition. Through faith in science he will acquire a new and enduring delight in the exercise of his capacities: he will gain a zest and interest in life such as the present phase of culture fails to supply.

In opposition to the view that the pursuit of science can obtain a strong hold upon human life, it may be argued, that on no reasonable ground can it appear a necessary or advantageous thing to the individual man to concern himself with the growth and progress of that which is merely likely to benefit the distant posterity of the human race. Our reply is, let those who contend for the reasonableness of human motives develop, if they can, any theory of human conduct in which reasonable self-interest shall be man's guide. We do not contend for any such theory. By reasoning we may explain and trace the development of human nature, but we cannot change it by any such process. It is demonstrably unreasonable for the individual man, guided by self-interest, to share the dangers and privations of his brother-man; and yet, in common with many lower animals, he has an inherited quality which makes it a pleasure to him to do so. It is unreasonable for the mother to protect her offspring, and yet it is the natural and inherited quality of mothers to derive pleasure from doing so. It is unreasonable for the half-starved poor to aid their wholly-starving brethren; and yet such compassion is natural and pleasurable to those who show it, and is the constant rule of life. Unreasonable though these things are, from the point of view of individual self-interest, yet they are done because to do them is pleasurable, to leave them undone a pain. The race has, as it were, in these respects, befooled the individual, and, in the course of evolution, has planted in him, in its own interests, an irrational capacity for taking pleasure in doing that which no reasoning in regard to self-interest could justify. As with these lower and more widely distributed instincts, shared by man with some lower social animals, so is it with this higher and more peculiar instinct, — the tendency to pursue new knowledge. Whether reasonable or not, it has, by the laws of heredity and selection, become part of us, and exists. Its operation is beneficial to the race. Its gratification is a source of keen pleasure to the individual, — an end in itself. We may safely count upon it as a factor in human nature. It is in our power to cultivate and develop it, or, on the other hand, to starve and distort it for a while, though to do so is to waste time in opposing the irresistible.

As day by day the old-fashioned stimulus to the higher life loses the dread control which it once exercised over the thoughts of men, the pursuit of wealth, and the indulgence in fruitless gratifications of sense, become to an increasing number the chief concerns of their mental life. Such occupations fail to satisfy

the deep desires of humanity: they become wearisome and meaningless, so that we hear men questioning whether life be worth living. When the dreams and aspirations of the youthful world have lost their old significance, and their strong power to raise men's lives, it will be well for that community which has organized in time a following of and a reverence for an ideal good, which may serve to lift the national mind above the level of sensuality, and to insure a belief in the hopefulness and worth of life. The faith in science can fill this place. The progress of science is an ideal good, sufficient to exert this great influence.

It is for this reason, more than any other (as it seems to those who hold this faith), that the progress and diffusion of scientific research, its encouragement and reverential nurture, should be a chief business of the community, whether collectively or individually, at the present day.

NOTES AND NEWS.

PURSUANT to the invitation already noted in *SCIENCE*, a number of gentlemen met in the library of the American museum of natural history in New-York City, on the 26th to 28th of September, and founded the American ornithologists' union. The membership consists of active, foreign, corresponding, and associate members. The active membership is limited to fifty residents of the United States and Canada; the foreign, to twenty-five non-residents of the United States and Canada; the corresponding, to one hundred residents of any country; the associate being composed of any number of residents of the United States and Canada. The officers of the union for the current year are, Mr. J. A. Allen, president; Dr. Elliott Coues and Mr. Robert Ridgway, vice-presidents; Dr. C. Hart Merriam, secretary and treasurer; Messrs. S. F. Baird, George N. Lawrence, H. W. Henshaw, and Montagu Chamberlain, councillors, — these nine officers constituting the council of the union. Dr. Coues presided over the convention, and continued in the chair in the absence of the president. Mr. Allen and Professor Baird, who were unable to be present, were added to the list of founders. After the discussion and adoption of a constitution, submitted by the committee of organization, and the election of officers, a large number of members were elected, raising the active and foreign membership nearly to the limit. The work of the union for the present year was laid out by the formation of committees, appointed by the chair, on the subjects of classification and nomenclature, of the distribution and migration of birds, of avian anatomy, of oölogy, and on the question of the eligibility or ineligibility of the European sparrow in America. The first-named committee, besides revising the current lists of North-American birds, is expected to consider the subject of zoölogical nomenclature at large; and its labors may result in the formation of a code of nomenclature applicable to other departments of zoölogy, as well as to ornithology. It consists of Messrs. Ridgway, Allen, Brewster, Henshaw, and Coues.

—Mr. Charles F. Parker, the curator in charge of the Academy of natural sciences of Philadelphia, died Sept. 7, after an illness of several months. Mr. Parker became a member of the academy in 1865, and was elected a curator in 1873. Shortly afterward he was appointed by the council curator in charge,—a position which he filled with singular efficiency until last March, when he was compelled to avail himself of leave of absence, granted by the council in the hope that he would soon be able to return. Mr. Parker had paid special attention to the botany of New Jersey; and, both in the completeness of his herbarium and the accuracy of his knowledge of it, he had few, if any, equals. Even before his connection with the academy, he was well known to the leading botanists of America, and his collection was frequently referred to by specialists for illustrative material. The many students who have visited the academy during his term of office will remember the alacrity with which he rendered them assistance in their investigations. Although he may be succeeded by one having a more general knowledge of natural history in its several departments, or a more profound knowledge of a specialty, the academy will probably not be able to secure the services of any one person able and willing to perform the same work so economically and efficiently.

—We copy from the daily press the following telegram from Lieut. Ray, commanding the Point-Barrow expedition, concerning whose safety there were reasonable grounds for anxiety:—

“San Francisco, Oct. 7, 1883. —I report my safe arrival here to-day with party. Also brought down Lieut. Schwatka and party from St. Michaels. All work accomplished as ordered by chief signal-officer. Pendulum observation not made. Leo reached Ooglaamie Aug. 22; was driven away by ice the same night; returned on the 24th; again driven away and damaged on the 25th; returned on the 27th, when party and stores were embarked; sailed on the 29th, vessel leaking badly; put into Unalaska, where she was beached and repaired.”

—A large and exceptionally fine collection of fossil plants from the Fort-Union group (Laramie) is now on its way to Washington, collected in the valley of the Yellowstone River, within thirty miles of Glendive, Montana, by Mr. Lester F. Ward, assisted by Mr. Richard Foster. Mention has already been made (*SCIENCE*, i. 559) of a small but interesting collection from this locality, which was partially elaborated last spring. The same stations were revisited and thoroughly worked. The expedition was very successful, and the collection is one of the largest and best ever made in the country. Fifty-seven boxes of fossils, aggregating nearly four tons in gross weight, were obtained. The material was carefully assorted, and scarcely any but cabinet specimens were taken. In the very large number of genera and species represented, there can scarcely fail to be some new to science. The localities examined embrace several distinct horizons within the group, each possessing a special facies. Nearly all the old forms described by Dr. Newberry appear in abundance,—*Populus*, *Pla-*

tanus, *Viburnum*, *Rhamnites*, *Tilia*, etc.,—but varied by additional species; while such new genera as *Trapa*, *Rhamnus*, *Ilex*, *Eleodendron*, *Asarum*, *Ficus*, etc., are present, often in great profusion, and beautifully preserved. Special pains were taken to secure as large and complete a representation as possible of those forms whose affinities are less obvious or wholly unknown. Mr. Ward intends to commence work on this collection as soon as it arrives.

—The 13th of August, 1883, was the hundredth anniversary of the successful attempt of the brothers Montgolfier to cause their hot-air balloon to rise. On that day a monument commemorative of the



event was unveiled at Annonay, where the Montgolfiers lived and worked. Joseph, the older, is represented as holding the balloon, while his younger brother, Étienne, fills it with heated air by means of a lighted torch. For the three days the streets of Annonay were filled with the crowds gathered to honor the memory of the great inventors. In the addresses stress was laid upon the aids which the use of the balloon may be to the sciences, especially meteorology, and in military operations. Joseph Montgolfier was born at Vidalon-les-Annonay, Aug. 26, 1740, and Étienne at the same place, the 7th of January, 1745. The younger brother died Aug. 2, 1799, at Serrière; and Joseph, after a stroke of paralysis in 1809, died at Balaruc-les-Bains on the 26th of June, 1810.

—A notable event of the present season's field-

work has been the descent of the Missouri River in a 'Mackinaw' (a sort of flat boat) from Fort Benton to Bismarck by a party of geologists, consisting of Dr. C. A. White, Mr. J. B. Marcou, and Mr. Lester F. Ward, with one assistant, for the express purpose of geological and paleontological study.

The distance, according to steamboat schedule, is 1,059 miles; and thirty days (Aug. 22 to Sept. 20) were consumed in the journey. A large part of the territory passed through is occupied by Indian reservations; and there is no white population between Benton and Poplar Creek Agency, the first post-office, — a distance of 567 miles. The river is very low at this season of the year; and the current was correspondingly sluggish, though still quite rapid enough in some places. Progress was farther impeded by shoals, bars, and head winds; and considerable time was, of course, occupied in climbing and examining the adjacent bluffs and mountains.

The geology of this region, as all know, is very interesting; and the trip is believed to have thrown much light upon some of its leading problems. The results of the expedition will, of course, be officially made known in due time by the several parties participating, who have brought with them ample data, both in the form of notes and specimens.

— Mr. G. Brown Goode arrived in Washington on the 2d inst. from London.

— Representatives of nearly all the branches of the western surveys have returned to Washington. Dr. C. A. White reports having explored a great number of miles of the upper Missouri in a row-boat, being engaged in extending and confirming his previous observations of the formations.

— The winter session of the Philosophical society of Washington opens on the 13th inst. A considerable number of communications on widely different topics are in readiness. Biological papers are not numerous. The Biological society will probably begin its session on the 19th inst. It is possible that negotiations for the formation of a Washington academy of sciences will be opened for a second time this winter, but with what success it is impossible at present to say. It seems to be generally considered that an academy would be desirable, but there is little agreement relative to the proper basis of union between the existing societies.

— Prof. K. A. Zittel of Munich is visiting this country, and will probably be in Washington early in this month.

— At the first autumn meeting of the Boston society of natural history, Oct. 3, Mr. F. W. Putnam gave an account of the great serpent-mound in Adams county, O., and of some other ancient works in Wisconsin and Ohio examined during the past summer.

— The Appalachian mountain-club commenced its Boston meetings on the 10th, when papers were read on the Route Salvan, by Selah Howell; on a trip over Osceola, the Twin Mountain range, and Garfield, by W. L. Hooper; and on an exploration of the Traveller Mountain, and the head waters of Mattagamon River, by G. H. Witherle.

RECENT BOOKS AND PAMPHLETS.

Aymard, J. La poudre à canon; le télégraphe; les montagnes et les volcans; les tremblements de terre, les pétrifications. Paris, *Lefort*, 1883. 107 p. 12°.

Barrois, T. Catalogue des crustacés podophtalmiques et des échinodermes recueillis à Concarneau durant les mois d'août-septembre, 1880. Lille, *impr. Danel*, 1883. 68 p., pl., map. 8°.

Berquin. Les merveilles du firmament, ou le système de la nature dévoilé à la jeunesse. Limoges, *Ardant*, 1883. 119 p. 8°.

Bonnet, E. Petite flora parisienne, contenant la description des familles, genres, espèces et variétés de toutes les plantes spontanées ou cultivées en grand dans la région parisienne, avec des clefs dichotomiques conduisant rapidement aux noms des plantes; augmentée d'un vocabulaire. Paris, *Savy*, 1883. 12+523 p. 18°.

Brass, A. Biologische studien. Theil I.: Die organisation der thierischen zelle. 8°.

Broca, P. Mémoires d'anthropologie. Paris, *Reinwald*, 1883. 800 p. 8°.

Chatenet, E. du. Pompéi et Herculaneum, découverte et description de ces deux villes romaines. Limoges, *Ardant*, 1883. 120 p. 12°.

Cole, E. M. Geological rambles in Yorkshire: a popular handbook of magnesian limestone, new red sandstone, etc. London, *Simpkin*, 1883. 112 p. 8°.

Costatin, J. Étude comparée des tiges aériennes et souterraines des dicotylédones. Paris, *Masson*, 1883. 177 p., 8 pl. 8°.

D'Anvers, U. Flowerless plants. London, *Philip*, 1883. (Sc. ladders.) 84 p. 12°.

De Long, Emma. The voyage of the Jeannette; the ship and ice journals of George W. De Long. Edited by his wife. 2 vols. Boston, *Houghton, Mifflin, & Co.*, 1883. 22+911 p., 2 portr., 5 maps, 14 pl., illustr. 8°.

Dubois, A. La science populaire. Au bord d'une mare, entretiens sur l'histoire naturelle. Limoges, *Ardant*, 1883. 304 p. 4°.

— Les animaux dans les bois. Limoges, *Ardant*, 1883. 192 p. 8°.

— Les oiseaux et les insectes. Limoges, *Ardant*, 1883. 191 p. 8°.

— Les végétaux dans les bois. Limoges, *Ardant*, 1883. 192 p. 8°.

Duclau, S. La science populaire; la chaleur et ses effets. Limoges, *Ardant*, 1883. 120 p. 12°.

Exposition internationale d'électricité, Paris, 1881. Jury reports. 2 vols. Paris, *Masson*, 1883. 484; 414 p. 8°.

Frenzel, J. Ueber bau und thätigkeit des verdauungskanal der larve der Tenebrio molitor mit berücksichtigung anderer arthropoden. Inaug. diss. Göttingen, *Vandenhoeck & Ruprecht*, 1882. 50 p. 8°.

Govin, M., and Moireau, M. Notions de cosmographie. Paris, *Bertaux*, 1883. 36 p. 18°.

Gresley, W. S. A glossary of terms used in coal-mining. London, *Spon*, 1883. 306 p., illustr. 8°.

Heaford, A. S. Strains on braced iron arches and arched iron bridges. London, *Spon*, 1883. illustr. 8°.

Illinois—Geological survey. Vol. 7. Geology and paleontology, by A. H. Worthen. Paleontology, by A. H. Worthen, O. St. John, and S. A. Miller; with an addenda (*sic*) by C. Wachsmuth and W. H. Barris. (Springfield), *State*, 1883. (4)+373 p., 31 pl. 1. 8°.

Kutscher, E. Die verwendung der gertsäure im stoffwechsel der pflanze. Inaug. diss. Göttingen, *Vandenhoeck & Ruprecht*, 1883. 36 p., 2 pl. 8°.

Lackemann, W. Euler's interpolirte producte. Inaug. diss. Göttingen, *Vandenhoeck & Ruprecht*, 1882. 43 p. 8°.

Lange, E. Goethe's farbenlehre vom standpuncte der wissenschaftstheorie und aesthetik. Inaug. diss. Göttingen, *Vandenhoeck & Ruprecht*, 1882. 38 p. 8°.

Leydig, F. Untersuchungen zur anatomie und histologie der thiere. 8°.

Mouillefert, P. Vignes phylloxérées; faits établissant l'efficacité et la haute valeur du sulfocarbonate de potassium pour combattre le phylloxera, etc. Paris, *Narbonne*, 1883. 58 p. 4°.

Munro, J. Electricity and its uses. London, *Tract society*, 1883. illustr. 8°.

Pichler, M. von. L'indicateur du travail et du fonctionnement des machines à piston, à vapeur, à eau, à gaz, etc., et son diagramme. Traduit par R. Seguela. Paris, *Baudry*, 1883. 5+98 p., 46 fig. 8°.