A half-dozen, or dozen, males chase down a female, roll her in the dust or mud as the case may be, and, despite the frantic fighting back, pull her tail, peck her wings, pinch her with their claws, and when the tormenters are tired out and she panting with exhaustion, the whole party adjourn to a convenient heap of dung, and, in less time than it is spoken, the joke seems forgotten.

They drive away birds larger and more courageous than themselves, if they are perching birds, by following at their heels, and doubtless also making uncomplimentary remarks. Watch the arrival of the first robin, and see the three or four hoodlums follow him from tree to tree for the first week after his coming. Not one dares touch him, but they make his life miserable.

The song sparrow, though he will vanquish the Englishman every time, soon tires of being tagged from bush to tree, and leaves in disgust. The same is true of the catbird, and to some extent of the oriole, which is also less common by half. I have seen them pull a "chippy's" nest to pieces during the owner's absence out of pure mischief, and I presume they do the same to the nests of other birds.

It is difficult to see what there is to recommend the little villain, and the man who introduced him should be classed with the man who introduced rabbits into Australia. X.

Fort Edward, Aug. 22.

Celestial Photomicrography.

STELLAR photography has advanced enough to justify the hope that, by the next opposition of Mars, some means of scrutinizing his landscape more closely may be found. If microphotography and its associated science, photomicrography, are pushed on parallel lines with stellar photography by co-operating specialists who can appreciate the requirements in both fields, something valuable may result.

The possibility of an Atlantic cable was laughed at by good electricians, and astronomers despair of overcoming the difficulties presented by diffraction, irradiation, chromatic and atmospheric blurrings, and light absorption; but these matters have been conquered in many respects in telescopy and general photography.

Materials that will afford the densest homogeneity of surface should be sought for, upon which the photographs can be taken, to be later scrutinized with microscopic lenses. It may be possible to arrange a battery of microscopes to take enlarged camera-lucida photographs, which in turn may be enlarged by "solar prints;" and if surfaces can be invented or discovered smooth and continuous enough to admit of these successive enlargements without breaking up the details, we may possibly capture the Martial men in the act of filling Schiaparelli's canals, and otherwise observe what their estimated five million years of seniority over us affords them. S. V. CLEVENGER.

Chicago, Aug. 21.

As to the "Extinction" of the American Horse.

IN 1881, in the *Kansas City Review*, E. L. Berthoud pointed out the fact that, in maps drawn up by Sebastian Cabot (who went in 1527 to the east coast of South America) to show his discoveries, at the head of La Plata, with figures of other animals he gives that of the horse.

This fact, as thus put on such indubitable record, is accepted by scientists, including Heilprin, Wilckins, and Flower. The latter, in his manual on "The Horse" (1891), says: "The usual statement as to the complete extinction of the horse in America is thus qualified, as there is a possibility of the animals having still existed, in a wild state, in some parts of the continent remote from that which was first visited by the Spaniards, where they were certainly unknown. It has been suggested that the horses which were found by Cabot in La Plata in 1530 cannot have been introduced."

The above is surely of great interest, and is worthy of repetition. The writer has come across two statements, which, taken in connection with the above, appear to be even more important and significant, and may profitably be given wider prominence. As they are not generally known, they are given for the purpose of their receiving the attention that they seem to deserve.

In the volume of the Naturalist's Library, entitled "The Horse," by Major Hamilton-Smith, published in London in 1841, appears the following: "Several recent travellers in the northern portion of that continent [America] question the race of horses now so abundant being imported subsequent to the discovery by Columbus" (p. 147).

In "The History and Delineation of the Horse," by the noted authority, John Lawrence, published in London, 1809, the following sentence occurs: "The non-existence of the horse in America, previous to its discovery by Europeans, has, however, been disputed; but I recollect not by whom, or upon what ground" (p. 7). ROBT. C. AULD.

Some Notes on The Rochester Meeting.

WHERE did the scientists come from? The first four hundred names on the register show their geographical distribution as follows, by States: New York, 119; Washington, D.C., 44; Ohio, 35; Pennsylvania, 24; Massachusetts, 22; Indiana, 19; Illinois, 18; Canada, 17; Connecticut, 13; Michigan, 11; Wisconsin, 10; Iowa, 10; New Jersey, 9; Missouri, 7; Maryland, 4; Kentucky, 4; Tennessee, 4; Alabama, 4; Maine, 3; Vermont, 3; California, 3; New Hampshire, Rhode Island, Minnesota, Georgia, and Florida, each 2; Virginia, West Virginia, North Carolina, Mississippi, Louisiana, and Texas, each 1.

More than one-fourth of the whole number came from New York State. Of the 119 from the State, 32 were from New York City and Brooklyn, 24 from Rochester, and 18 from Ithaca. Washington, D.C., furnished 44, the largest number from any one city. The whole of New England sent only 45, although it has until recently been considered the scientific headquarters of the country, and is more thickly dotted with colleges than any other section. Cornell University was more largely represented than any other University, while Princeton was not represented at all; the New Jersey delegation coming chiefly from Rutgers and Stevens. The central western States showed up handsomely, and twelve southern States sent from one to four men each; while from the States and Territories west of the Missouri River there was no representation at all, except three from California.

Geographically, therefore, the scientists who attended the meeting are not evenly distributed. New York State sent far more than its quota, even after deducting the attendance from Rochester, the place of meeting. In proportion to its population, Ohio sent twice as many as Pennsylvania, although its average distance from Rochester is greater.

The programme for the third day of the meeting (Friday) contained a list of 146 members that had been elected since the Washington meeting, with symbols expressing their affiliations with the different sections. The majority of these new members specified their intention of joining one section only, but many named two sections, and some three. Twelve members did not specify any section. The following shows the apportionment of these new members among the sections: —

Section A, Mathematics and Astronomy,	14
" B, Physics,	15
" C, Chemistry,	21
" D, Mechanical Science and Engineering,	5
" E, Geology and Geography,	21
" F, Biology,	42
" H, Anthropology,	21
" I, Economic Science and Statistics,	23
Totals, including duplications,	162

The several branches of science are therefore far from being equally represented in the new membership. The branch of mechanical and engineering science, which in the country at large is developing by leaps and bounds, sends to the association only one-fourth as many members as chemistry and one-eighth as many as biology. The latter sends more new members than the three ap-

plied sciences, chemistry, physics, and mechanical science, put together. Geology, geography, biology, and anthropology furnish more than half of all the new members.

In the reading of papers before the sections, the same want of proportion was shown. Section F, biology, held sessions on both Thursday and Friday, morning and afternoon; and 32 papers were listed for those two days. Section I, economic science and statistics, held a session on Thursday afternoon only, and none on Friday, and only 4 papers were listed, and of these the only paper that was statistical was a five minute paper on Statistics of the Salvation Army! The Section of Biology, in fact, is so overcrowded with papers and discussions that it was decided to split it into two sections, F, Zoology, and G, Botany; while a proposition was made, although not entertained, to consolidate sections D and I into one section.

At the recent meeting of the British Association, it is reported that there were 2,500 members in attendance. At the Rochester meeting there were less than 500.

From the above facts, it appears that the American Association is not a fairly representative body of American scientific men. In it the physical sciences are dwarfed by the natural sciences. The reason for this is undoubtedly because the applied scientists, and especially those in the department of mechanical science, have so many societies of their own that they are diverted from and lose their interest in the American Association. In engineering there are four large national societies, the civil, the mechanical, the mining, and the electrical, besides numerous local societies, aggregating a membership of probably 5,000 persons, not counting duplications of those who belong to two or more societies. The small attendance at the section of economic science is probably due to the superior attractions offered by the American Social Science Association. The recent reorganization of the American Chemical Society with its branches will be very apt to diminish the interest of chemists in section C.

These facts are worthy of consideration by those interested in the future of the Association. WILLIAM KENT.

New York, Aug. 29.

BOOK-REVIEWS.

Report of the United States Board on Geographic Names. Ex. Doc. No. 16, *House of Representatives*, 52*d Congress.* Washington, Government.

THE necessity of bringing about a uniform usage and spelling of geographic names throughout the executive departments of the government has led to the creation of a board representing the Departments of State, War, Treasury, Navy, and Post Office, the Coast and Geodetic Survey, the Geological Survey, and the Smithsonian Institution, who serve without pay and can officially say in many cases what names shall be used. Names in our country have not been bestowed by any formal authority, except the more important ones of States, counties, and municipalities. The early explorers would employ aboriginal designations or others of little import; their successors often proposed others; a mountain range would receive different names from different sides of approach. Post-offices and railroad stations may not conform to the local names of the enclosing townships, or else very familiar terms have been excessively multiplied. The modes of spelling vary from time to time. To meet the various necessities, the Board adopted the following rules in case the local usage is divided: 1, Avoidance of the possessive form of names; 2, the dropping of the final "h" in the termination "burgh;" 3, the abbreviation of "borough" is "boro;" 4, the Websterian spelling of "center;" 5, the discontinuance of hyphens in connecting parts of names; 6, the omission, whenever practicable, of the letters "C. H." (court house) after the names of county seats; 7, the simplification of names consisting of more than one word by their combination into one word; 8, the avoidance of the use of diacritic characters; 9, the dropping of the words "city" and "town" as parts of names.

As to the employment of foreign words, the Board recommend that our charts for the use of the navy adopt the local names in the language of the several countries, and for home use the Anglicised forms. About 2,000 names have already been passed upon, of which a list is printed as an appendix to the report. Another appendix presents a list of all the counties in the United States.

It is easy to see that this Board is doing great service for the improvement of geographic nomenclature. Unfortunately, it cannot have power to compel the adoption of the sensible names proposed for the new States recently added to our galaxy and rejected by Congress, nor can it persuade people to use good sense after controversies have been inaugurated. The world is, however, improving, and the very objectionable names are everywhere ridiculed.

The Naturalist in La Plata. By W. H. HUDSON. London, Chapman & Hall. Ill. 396 p.

THE universal interest now taken by all classes in scientific matters has of late years given rise to a new class of books of travel. The celebrated "Voyage of a Naturalist," by Darwin, or perhaps more properly the "Wanderings in South America," by Waterton, formed the starting-point for a series which includes such books as "Travels in Peru," by von Tschudi; "Travels on the Amazon" and "Malay Archipelago," by Wallace; "Naturalist on the Amazons," by Bates; "Naturalist in Nicaragua," by Belt; "Two Years in the Jungle," by Hornaday; "Life in the East Indies," by Forbes, and many others of similar title and character. The existence and popularity of these books is evidence of the interest they have excited in the public mind; and in view of the good influence they exert there cannot be too many of them. The "Natural History of Selborne," although limited in its scope to a single parish in England, is an example of the multitude of objects which can be made interesting to all classes of readers, and it is perhaps not too much to say that there is scarcely a section of our own country about which an equally interesting book could not be written. The fact is that the objects to be studied in nature are inexhaustible. They exist in earth, in sky; in air, in water; in lane, in tree, in barren plain. Everywhere in fact that one can turn, facts of the profoundest interest are to be observed.

The ordinary globe-trotter has left few places unexplored as far as his foot alone is concerned. He has penetrated to the wilds of tropical Africa, and has left his traces amid the snow and ice of the Arctic regions; he has suffered from hunger and thirst in the deserts of Australia, and has been shipwrecked in the vast Pacific; he has explored the snowy heights of the Himalayas and the Andes, and penetrated the humid jungles of India; he has braved the sands of the desert of Gobi and the terrible glare of the Sahara. The globe-trotter used to write books describing his travels; but, alas, too frequently his eyes saw no further than his feet. He chronicled his daily aches and ills, his breakfast and supper, and mentioned the rivers he crossed or the mountains he saw. The day for such books has passed; and a man who would be listened to now must have more to tell of than how he cooked his dinner, of how many miles he sailed or walked or rode. The modern traveller must, therefore, be versed in some branch of science. He must know men, or birds, or beasts, or plants. His volume, too, must be something more than a mere itinerary; and the more closely he studies the workings of nature in her secluded haunts the wider the circle of his readers and the greater the value of his book.

Of such books as those we have mentioned above there cannot be too many. It is, therefore, with a feeling of pleasure that we welcome a late comer to the ranks, "The Naturalist in La Plata." The author is a native of the country whose phases of life he chronicles. He is an enthusiast, a lover of beasts and birds, and he makes his reader love with him. The book is filled with interesting matter, and in this notice we will mention some of the many tidbits which are offered.

One of the most interesting subjects touched upon, all too briefly be it said, is that wonderful instinct of bird migration. It seems incredible that out of twenty-five species of aquatic birds, thirteen are visitors from North America, several of them breeding in the Arctic regions and crossing the whole tropical zone to winter, or rather to summer, on the pampa. In September and even in August they begin to appear on the pampa — plover, tatler, god-