

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 telescopic 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. CLEVINGER.

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:—

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| 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-