dass aus unbefruchteten Arbeitereiern von Lasius niger Fabr. wiederum Arbeiter entstehen. Also wieder ein Dogma verfrühter Verallgemeinerung, dass in Nichts zerfliesst!\*

APRIL 8, 1904.]

Surely I may be permitted to express as a probability what the most eminent myrmecologist states in such emphatic language. That I was well aware of the remote possibilities mentioned by Castle, and of others which he does not seem to have surmised, is clear from my express statement that the observations of Tanner, Reichenbach and Mrs. Comstock are 'by no means final.' It would have been natural for a less captious critic to suppose that the views advanced in my paper were not determined solely by the observations cited from other authors, but to some extent by my own experiences, which though less tangible and less readily formulated at the present time, are not less suggestive to me of the trend of future investigation.

Academic convictions like those advanced by Castle can be of service only in prejudging a field of inquiry; they can be of no imaginable use in stimulating or furthering research except indirectly through the spirit of contradiction aroused by their dogmatic character. If Castle had any new facts, or original interpretations of old facts, for that matter, to bring to bear on the problems under discussion, I should be the first to welcome them. We need something more, however, than mere discussions of possibility and probability, if we are ever to dispel the mystery that envelops many of the instincts and reproductive processes in the social hymenoptera.

WILLIAM MORTON WHEELER.

AMERICAN MUSEUM OF NATURAL HISTORY,
March 24, 1904.

## VEGETABLE BALLS.

To the Editor of Science: Can any of your readers refer me to any published mention or description (other than in Thoreau's 'Walden') of those balls of matted vegetable matter formed on the sandy bottoms of shallow ponds, apparently under the action of wave-motion? In what ponds or lakes (other than Flint's or Sandy Pond, in Lincoln,

Mass.) are they known to occur? Have they any recognized names? Of what materials are they mainly composed other than *Eriocaulon* leaves? Any information will be very welcome.

W. F. Ganong.

NORTHAMPTON, MASS.

## SPECIAL ARTICLES.

RIGHT-EYEDNESS AND LEFT-EYEDNESS.

I WISH to solicit the aid of the readers of Science in securing answers to the following questions concerning left-handed persons they may know:

- 1. Name, or at least initials, residence, sex, age and occupation?
- 2. Is the left-handedness complete or only for some of the acts usually performed with the right hand by right-handed persons?
- 3. Is the left-handedness the result of accident to the right hand or arm, or did it exist from infancy?
- 4. With which eye is a gun sighted, a board or yard-stick proved straight, or a table level, etc.?
- 5. With which eye, without glasses, is the vision of letters across a room in a good light the clearest? (Alternate covering either eye, not closing it.)
- 6. If glasses are worn for distant vision, the oculist's prescription, and the relative sharpness of vision of each eye with the glasses?

Right-handed persons are, I believe, naturally right-eyed, and the left-handed are left-eyed. There is little doubt as to the first, but I have found it difficult to get data concerning a sufficient number of the left-handed.

The fact of right-eyedness or left-eyedness has, it seems to me, much greater significance than the similar conditions pertaining to the hands, but, so far as I can learn, nobody has even thought of it, much less discussed its many suggestive implications. Indeed, I question if the right-handedness or left-handedness is not a simple result of the ocular one-sidedness which preexisted and made necessary the paramount use of the one or the other hand. Both conditions, moreover, seem to me probably the simple result of the usual location of the speech-center in the left-brain. I

<sup>\*</sup> The italics are mine.