pine should be regarded as applicable to either *Chimaphila corymbosa* Pursh., or *C. occidentalis* Rydb., the two species into which *C. umbellata* Nutt. has been split up in the "North American Flora."

There is, of course, room for discussion as to the best method of procedure to adopt. Many botanists—especially those who are never called on to name plants for the general public—are quite satisfied with the Latin names alone, and from them in all probability no assistance can be expected in devising English names. The subject is one that might well be discussed at some conference of American botanists, as it mainly concerns ourselves alone.

J. ADAMS

CENTRAL EXPERIMENTAL FARM,
OTTAWA, CANADA,
November 21, 1916

PROPULSION BY SURFACE TENSION

TO THE EDITOR OF SCIENCE: In November, 1911, I described in your columns a little motor boat which I supposed to be novel. A wooden boat only a couple of inches long, was provided with a stern consisting of a slab of soap, and when placed on clean still water moved about with noticeable rapidity.

I have just learned that M. Henri Devaux constructed an absolutely equivalent craft many years ago (*La Nature,* April 21, 1888). His boat was made of tinfoil and the "propeller" was a scrap of camphor attached to the stern.

Pray allow me to tender to M. Devaux my apologies and compliments.

GEORGE F. BECKER

SCIENTIFIC BOOKS

A Sylow Factor Table of the First Twelve Thousand Numbers. By HENRY WALTER STAGER. Carnegie Institution of Washington, 1916. Pp. xii + 119.

Dr. Stager's tables are intended to furnish the possible number of Sylow subgroups for all groups whose order does not exceed 12,000. For every number within that limit are listed all the divisors which are of the form $p(kp+1)$, where p is a prime greater than 2 and k is greater than zero. In determining the possible number of Sylow subgroups such divisors must be known before further methods are applicable. Thus from the table we learn that 1,080 is divisible by $3(1 \times 3+1)$, $3(3 \times 3+1)$, $3(13 \times 3+1)$, $5(1 \times 5+1)$, $5(7 \times 5+1)$ and $5(43 \times 5+1)$. From these results we know that for a group of order 1,080 there may be 1, 4, 10 or 40 subgroups of order 3^3 and 1, 6, 36 or 286 subgroups of order 5. The exact number is to be determined by other principles of group theory. The table also gives the expression of each number up to that limit as products of powers of primes.

The making of tables, a tedious and apparently mechanical task, is of the highest importance in all branches of science. It is likely that more fundamental theorems have been discovered by the examination of listed results than by any other means. This is certainly true in the theory of numbers, and it is possible that workers in the theory of groups have not made enough use of this method of investigation. The construction of tables for the theory of groups is especially difficult on account of the great complexity of the material. Only brief tables have hitherto been undertaken and it is to be hoped that Dr. Stager's work in this direction may be the beginning of a systematic campaign in this important field.

The construction of an extensive table almost always brings to light hidden relations, suggesting new theorems for investigation. In Dr. Stager's table certain numbers are noted which have no divisors of the sort indicated above. Such numbers seem to resemble primes in many ways, and in particular their "curve of frequency" seems to run roughly parallel to the corresponding curve for primes. Dr. Stager has made a study of these numbers, and has added a list of them up to the limit of his table.

The author is to be congratulated upon the completion of so important and formidable a piece of work. While the reviewer has, of course, not checked over any part of the table he has the utmost confidence in the accuracy of the list. The printing has been done by the