

NEW PLANTS NOW COMMON.

Out of the thirty-five new arrivals, the following nine have taken the county by storm—that is, they are now very common:

Arenaria serpyllifolia.	Lactuca scariola.
Croton monanthogynus.	Melilotus alba.
Dysodia chrysanthemoides.	Plantago Virginica.
Chrysanthemum leucanthemum.	Plantago lanceolata.
Lithospermum arvense.	

SOME EVOLUTION AMONG CACTI. By JOHN M. COULTER.

[ABSTRACT.]

The nascent tubercles of *Eumanillaria*, *Coryphantha*, *Echinocactus*, *Ana-halonium* and *Lophophora*, show in their generic characters perfectly intergrading characters, which serve to clear up certain homologies and relationships.

PHYSICS AND CHEMISTRY.

PERMANGANIC ACID. By THOS. C. VAN NUYS AND SHERMAN DAVIS.

It is the purpose of this investigation to work out, if possible, I. The exact conditions under which permanganic acid or its salt undergoes spontaneous decomposition. II. Whether it is effective as an oxidizing agent in the decomposition of organic matter.

I. For determining the exact properties of the acid or its salt, the following plan was adopted. Glass tubes, about 30 mm. and 30 cm. long were sealed at one end and carefully annealed. They were then filled with a strong H_2SO_4 sol. of potass. permanganate and heated to $100^\circ C$. for 12 hrs. This treatment completely removed any organic matter adhering to them. The distilled water was purified by boiling a strong H_2SO_4 sol. of potass. permanganate, with a condensing apparatus, for some time and then distilling the second time with $KMnO_4$. The $NaOH$ used in making the standard alkali sol. was prepared from the pure metal and absolutely pure water. The tubes were then carefully rinsed with the C. P