

rendered the probability of any great spread over the State exceedingly slight. The plant should, however, be carefully watched, although at present not of sufficiently general distribution to take rank among the dangerous weeds of the State.

*Erigeron annuus* Pers., white top, which had apparently been practically eliminated from the list of weeds of the State, has during the past two years appeared in great abundance throughout the State. In many cases it has entirely taken meadows in which it had been practically unknown for years. Reports of its occurrence came to me from a large number of counties with requests for an explanation of its sudden reappearance. No satisfactory explanation has as yet suggested itself, but as the plant yields readily to careful cultivation it may be considered as annoying rather than dangerous.

*Rumex acetosella* L., field or sheep sorrel, while not a conspicuous landscape feature is in many respects to be considered the most dangerous weed in the State. It spreads rapidly and because of its early leafing and habit of growth supplants the grass and other desirable forms. It sets root deeply and resists successfully all of the ordinary means of weed eradication. Apparently so long as the smallest portion of the root is left in the ground there is danger ahead. I have records of many cases in which the farmer has given up what seems a hopeless contest and has abandoned his fields.

In the light of to-day, the introduction of new weeds is not to be greatly feared. The persistence of our indigenous forms is, however, quite a different matter. The presence of these noxious weeds is not merely a constant disgrace, but also a constant menace. The passage and enforcement of wisely devised weed laws would prove of incalculable benefit to the State, and it should be the part of botanists to urge the passage of rational and workable laws upon this subject.

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EXPERIMENTS IN GERMINATION OF COMPOSITES. BY STANLEY COULTER.

[Abstract.]

A report upon one hundred experiments in the germination of composites, confirming positions taken in a paper presented to the Academy last year. These positions were as follows:

1. The achenes of composites show a low germination percentage.

2. The achenes of the earlier and later flowers are as a rule not viable.
3. The seedlings are especially sensitive to heat and temperature changes.
4. The period of the vitality of the achene is rarely more than two years.

Detailed report is reserved until more extended experiments are made.

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THE MYCORRHIZE OF APLECTRUM. BY D. T. MACDOUGAL.

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THE TENDRILS OF ENTADA SCANDENS. BY D. T. MACDOUGAL.

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THE ERICACEÆ OF INDIANA. BY ALIDA MABEL CUNNINGHAM.

In determining the distribution of the Ericaceæ in Indiana there is encountered the same difficulty as in the case of so many other families. A complete and thorough botanical survey of the State would be a task involving untold labor, and, however enthusiastic the collector, the time and expense involved in such an undertaking will necessarily delay for some time the accomplishment of the work. As a result, comparatively few localities in the State have yet been fully reported. But it is a matter of still greater regret that so much of the work done in the past has been a mere waste of energy, the reports left so incomplete, and even the name of the worker, in many cases, is unknown. The last State catalogue\* reported twenty species of Ericaceæ and six have since been added by various collectors. These species represent nineteen counties, and eleven have no collector named from any county in the State.

The only species I have been able to find in Tippecanoe County is *Monotropa uniflora* L. In the summer of 1895 I found eight specimens. They were growing in a thick growth of timber, chiefly white oak and black oak, on a heavy clay soil. The next year the same timber land was visited and they were found there of the most perfect character and in the greatest profusion all over the tract of

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\* Of these twenty species, *Oxydendrum arboreum*, D. C., *Kalmia angustifolia* L., *Rhododendron nudiflorum* Torr., and *Pyrola secunda* L. are not found in Monroe County, as recorded in the State catalogue, and are to be excluded from State Flora. This leaves the number of known species twenty-two.