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A NEW FIELD FOR INVENTION.

A correspondent, writing from New South Wales, calls attention to a wide and promising field of invention which does not appear to have been much explored. In all parts of the world there are many noxious plants, which cultivators of the soil find it difficult or impossible to eradicate by the means now in use.

The first, which flourishes in the warmer parts, is a cactus called the prickly pear; the other, which is confined to the cooler parts, is the English sweetbrier, the English wild rose thus proving as severe an affliction to parts of Australia as the Scotch thistle has in other regions.

In view of the similarity of animal and vegetable life, and the ease with which animal pests can be destroyed by poison, our correspondent raises the query whether some means of killing these vegetable pests might not be found that would be cheaper and more efficient than manual labor.

If poison is used, it should be the inventor's aim to find one that would be fatal to the plant to be exterminated and yet harmless to other plants, or at least not such as to leave in the soil elements that would spoil it for future cultivation.

Obviously the best way to dispose of a plant that is so irrepressibly thrifty as to be a nuisance is to find some way to utilize it. Not a few of our most useful plants were once rank pests, owing to their persistent invasion of lands employed for other purposes.

If no use can be found for the pest, the next best step would seem to be to study the conditions of its local abundance, and correct them, if possible, by means which will make the soil more suitable for other uses. The charming sweetbrier of the English roadside causes no trouble there.

The field, as has been already noticed, is a wide one, and comparatively unworked. The values to be affected by successful inventions in it are enormous, and the inventions themselves could hardly fail to be remunerative.

COMET alpha 1882.

The first comet of the present year has been discovered. Mr. C. S. Wells, an assistant at the Dudley Observatory, Albany, was the fortunate finder, and there is a fair prospect that the celestial visitor will prove a brilliant member of the cometic family.

Astronomers are busy in watching its movements, noting its indications, computing its elements, and deducing from these premises an ephemeris that will be a guide to its present position in the sky, and a means of detecting by a comparison of orbits whether the mysterious stranger is an old friend renewing acquaintance or whether this is its first visit to the clime of the sun.

Mr S. C. Chandler, Jr., of the Harvard Observatory, has computed the elements, and an ephemeris of the comet, from observations made at Ann Arbor and Cambridge, which, however, can only be considered as approximate, until confirmed and strengthened by future observations.

Some interesting facts and possibilities may be deduced from the combined labors of the two brilliant astronomers who are first in the field. Comet alpha is remarkable for its small perihelion distance. According to Mr. Chandler it will come within a hundred

thousand miles of the sun, passing through the corona and perhaps grazing the photosphere. Mr. Boss estimates the distance at ten million miles, but both observers agree in prophesying a very near approach. Few instances are recorded of comets coming so near the sun.

The new comet makes its perihelion passage about the middle of June, and a magnificent display may be anticipated about that time. It is noteworthy for its great brilliancy under present conditions. It is now nearly two hundred million miles distant, and yet it has a bright, well defined nucleus, and a well developed tail.

This is the history of Comet alpha, as far as it is known, but there is a rich promise of an entertaining visitor in our sky during the months of April, May, and June. The erratic stranger is moving westward and northward, having greatly changed its position since it was discovered.

Those who know the most about cometic astronomy are the least disturbed concerning any untoward accidents in its passage; and astronomers are looking forward to its close approach to the sun as a possible means of learning something concerning the physical structure of the huge globe of fire that is intimately and inseparably interwoven with the destiny of the human race.

The elements of the orbit of Comet alpha are thus given by Professor Boss: Time of perihelion passage, June 15; longitude of perihelion, 49° 35'; longitude of node, 206° 39'; inclination, 74° 47'; perihelion distance about ten million miles.

April 14, R. A. 18h. 50m., Dec. 51° 9' N. Mr. Chandler's computations give: Longitude of perihelion, 62° 30'; longitude of node, 200° 11'; inclination, 70° 51'.

As the comet approaches nearer the earth other astronomers will doubtless map its course, and repeated observations will modify results. Even if the figures are at fault in minute particulars, there is every reason to expect that a comet of grand and awe-inspiring proportions will in the coming months span the heavens with its gossamer train; that there will be intense excitement in watching its near approach to the sun; that it will be observed and studied as comet was never observed and studied before; and that unless men of science are greatly mistaken, it will take rank with the distinguished comets of 1811, 1843, 1858, 1861, and 1880 on the cometic annals of the nineteenth century.

FISH CULTURE IN AMERICA.

The eleventh annual meeting of the American Fish Cultural Association began in this city April 3. A large number of the more active State and national Fish Commissioners and other friends of fish and fishing were present.

The meeting was called to order by the Vice-President, Mr. George S. Page, of this city, who gave a most encouraging account of the success which had attended the artificial propagation of trout, shad, and black bass.

The Secretary, Mr. Barnet Phillips, read a paper by Mr. H. D. McGovern, of Brooklyn, on the habits, endurance, and growth of the carp. He advised the putting of a few carp in trout ponds to keep the ponds clean.

Assistant United States Commissioner Mather read an interesting paper on a remarkable development of embryo salmon. It had been his belief that the absorption of the sac was necessary for the complete development of the young fish, but he had been convinced of the contrary by an accident which happened in a newly constructed hatchery at Roslyn, L. I.

"The theory of the fishermen near sawmills is that sawdust gets into the gills of trout and kills them. This may be true to some extent, but I doubt it, for the reason that sand or other material does not appear to injure the gills, and I have taken adult trout below sawmills. I am inclined to think that the mills are destructive merely to the young by covering the spawning beds to some extent, but more by the absorption of turpentine from the pine or tannin from the oak, the evil effects of which we know too well."

Commissioner McDonald, of Virginia, described a successful method of transporting impregnated eggs to long distances, their development being retarded by reduction of temperature. Mr. Blackford spoke of the recent shipment of 14,000,000