14,500 miles, and for Phobos 5,800 miles. The semi-diameter of the planet being 2,100 miles, the horizontal parallaxes of these satellites are very large, amounting to 21° for Phobos. The nearness of this satellite to the surface of the planet will produce apparent eccentricities in its motion, and cause it to appear as a variable star.

The size of the satellites is not well known, and perhaps the only thing we can say in this respect is the indefinite statement that they are very small. A photometric determination of their size was made by Professor Pickering, Director of the Harvard College Observatory. Professor Pickering's observations are not yet published, but I understand that his result is that the diameter of Deimos is 6 miles, and that of Phobos 7 miles. Mr. Wentworth Erck of Ireland also made a photometric determination of the diameter of Deimos, and found this diameter to be 14 miles. Mr. Erck's account of his determination is published in the *Astronomical Register* for January, 1878. Such determinations are, I think, subject to a considerable degree of uncertainty; but Mr. Erck's method gives us the means of estimating with tolerable accuracy the apparent telescopic brightness of these satellites. My own estimates of magnitudes having become uncertain by using the 26-inch refractor, Professor Eastman and his assistants, Messrs. Frisby, Skinner, and Paul, have made estimates of the magnitude of the star compared with the outer satellite on August 17, using for this purpose the 9½-inch equatorial; and from these estimates I infer that Deimos at the opposition, and at its elongation was of the 12th magnitude of Argelander's scale.

Science News Letter, August 15, 1931

MARINE BIOLOGY

Oysters Will Be Planted And "Reaped" Annually

THE SOW-AND-REAP method so common to agriculture is on trial in the oyster industry. An enterprising company operating at Padilla Bay on Puget Sound will plant seed oysters from Japan about the first of each year and harvest them the following fall.

Fifty million oysters are now growing in the Padilla beds and will be ready for cocktails before long. Care will be taken not to let the oysters reach the gigantic, "beefsteak" size they would if allowed to attain their full growth.

Science News Letter, August 15, 1931

BOTANY-MEDICINE

Ragweed Cause of Hay Fever Suffering in Late Summer

LATE summer, bringing the main hay fever season, is upon us. The air is filled with the invisible plague of floating pollen, tormenting sensitive noses and starting thunderstorms of sneezes and torrents of irrepressible tears.

Why should hay fever rise to such a crescendo just about now, and hold its evil spell upon so many suffering mortals for the next month or so?

The answer is found in one word: Ragweed.

For some reason as yet unknown, more persons are sensitive to the pollen of the two principal species of ragweed, the tall and the low, than to any of the many other pollens that can and do cause hay fever suffering in others.

Between the two evil weeds it is hard to choose the worse. But perhaps the tall ragweed, because of its lustier growth and its distribution, at least as widespread as that of its low cousin, loads the air with more pollen and is therefore the more accursed.

The tall ragweed would be not such an ill plant to see, if one did not know its despicable character. To be sure, it has no gaudy bloom, like that impudent vegetable tramp the jimsonweed; but at any rate it is tall and straight, reaching heights of from six to sixteen feet, and it masses into dense, jungly growths on rich lands left fallow, particularly on often-flooded river-bottoms. The fact that it is an annual, sprouting anew each year from last year's abundant seed, makes it particularly well adapted for the quick conquest of such places.

When the tall ragweed begins to shed its pollen, the low ragweed picks about the same time to add its quota of sneeze-provoking dust.

The low ragweed is a lesser plant than the tall, though not much if at all a lesser evil. It seldom lifts its tough, scrawny stems more than three or four feet high, and in much-tramped pastures, which it seems to delight in, it may not be taller than a foot or two. But what it lacks in height it makes up in distribution. Less particular about soil and moisture than its brother pest, the low ragweed grows in thin, dry upland soils as well as in rich bottom lands and between rows in well-watered cornfields.

A bright and lovely wild flower, that has the ill luck to come into bloom con-

GOLDENROD

It starts psychological sneezes, and is unjustly accused of being a real cause of the ailment

TALL RAGWEED

The ragweeds, both tall and low varieties, give more people hay fever than any other plant.