

AGGRESSIVE CHARACTER AND ECONOMIC ASPECT OF
THE WHITE HEATH ASTER.

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(Plate 3.)

The White Heath Aster (*Aster ericoides*) is an indigenous species whose distribution is given in our manuals as "Canada, Florida, and the Mississippi," "Maine and Ontario to Florida, west to Wisconsin and Kentucky," and "South New England to Minnesota and southward," the variety *pilosus* "mainly in the Western States." It is one of the commonest Asters throughout Ohio, occurring doubtless in every county in our State. The variety *pilosus* seems to be the common form in our region, and may be seen growing in rich and poor soil with almost equal thrift, and occurring in all habitats except the woods and swamps.

Its capacity for adaptation to the advance of civilization is remarkable, and this occasions the remark now very generally heard among the farmers that it is a "new weed in the region," "not known here five years ago," "just came all at once," "the latest and worst weed we have," and other expressions of similar import. As a matter of fact, the roadsides in many places are lined with it, fields with a poor stand of clover, timothy, or blue grass are completely covered with it, and all waste places, vacant lots, and neglected spots are profusely decorated with the same.

The plant is a rather coarse weed; but in spite of this fact it is somewhat attractive because of the masses of green foliage and the white flowers that become prominent before the summer is gone, and last throughout the early and middle autumn. The stems are tough



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and wiry and this gives the local name "Steelweed," a common designation in Adams County and adjoining regions. It is said by some, however, that this name is given it "because the flowers are the color of bright steel." Another name frequently applied in the localities mentioned is "Bee-plant" for reasons suggested in the name itself, and still another is "Stickweed," for which I could learn no explanation. Other common names which Britton enumerates are Frost-weed, Michaelmas Daisy, Farewell Summer, White Rosemary, Dog-fennel, Mare's-tail, and Scrub-bush.

Though complaint against this plant is universal in some sections, it is not, I think, well founded in all cases. It has some merits now and then acknowledged by those who are close observers. The allegations pro and con may be summarized as follows:

First, the statement is made that it is "driving out every other grass" and "invading" the whole country. It is certainly more abundant than it was before the country was cleared and cultivated; yet after all but little of it is seen in good pastures and vigorous meadows, and none at all in ground that is under thorough and constant cultivation. It has not the aggressiveness possessed by some of our weeds, but it does quickly take possession of neglected and fallow ground. It does not spread extensively or rapidly by underground stems as do some of the Compositae. It has simply short rootstocks for this purpose. Its mode of multiplication by this means is illustrated in the figures shown in Plate 3. These are from photographs taken late in November, and indicate the preparation the plant makes for the next season's work. The specimens numbered 1 and 2 had been mowed to the ground during the summer. But this instead of killing the plants stimulated their propensity to vegetative multiplication. The result was therefore the opposite of what the farmer intended. Figure 3 shows a plant undisturbed during the growing period, and its energies active and latent were almost entirely exhausted in producing flowers and seed. Let the plants alone then rather than shear their tops, and the sooner will they exhaust themselves.

It is true, as the figures plainly suggest, that this Aster is not a difficult one to eradicate. While the roots are numerous, they are not long; and even the shallowest plowing or ordinary cultivation will effectually destroy the plant. As to multiplication by seed germination, it needs simply to be remembered that good or even fair cultivation of the soil will prevent this weed from growing, and that many species of weeds will get in old meadows and pastures as rapidly as the cultivated grasses are killed by excessive grazing or the casualties of season and climate.

In the second place the weed is charged with the heinous crime of "killing stock." Thorough inquiry in different localities established the fact that this plant, eaten to considerable extent late in

the season by cattle and horses it is true, does damage perhaps only as the consumption of an excessive amount of almost any kind of dry and comparatively innutritious vegetable matter might do. It is said to be especially binding, and the constipation no doubt was a factor in bringing about the fatal results that were cited. While stock will eat the plant when at hand they take but little of it if nutritious grasses can be found. A very intelligent and observant farmer, however, was seen cutting and burning the plants which covered his pastures to save his stock—his neighbor by carelessness in this respect, he averred, having lost some valuable horses.

On the other hand this White Heath Aster is an important bee-plant. Bees will "work on it the whole day," and the plant is in bloom from middle or late summer to late autumn. The honey made is white, and has a strong tendency "to turn to sugar." One farmer who has two hundred and fifty stands of bees, now that this Bee-plant is well established as a sure crop, will sow no more buck-wheat for his bees.

I have said this species is becoming excessively abundant in some (hilly) portions of southern Ohio. It can well be regarded as "a great boon" merely because it is a soil-binder of marked efficiency. It prevents the destructive washing of the hillsides in the Fall, open winter and early spring. Such a plant would not be needed to a great extent, were methods and habits of cultivation perfect or in a high state of development; but this phase of the economic aspect of the case must at present be insisted on.

Finally it may be said that as a fertilizer this Steel-weed takes a high rank. It is regarded by observant farmers as but slightly inferior to a crop of clover. It does not decompose when turned under as quickly as clover, but that it yields plant-food and answers well the mechanical purposes of a coarse fertilizer, testimony is unanimous and apparently conclusive.

EXPLANATION OF PLATE 3.—*Aster ericoides pilosus*, reproduced from photographs taken late in November. Figures 1 and 2 show plants with abundant, and Figure 3, with few young shoots close to the ground. Plants shown in Figures 1 and 2 had the tops removed in summer, Figure 3 shows the common appearance at the end of the growing season of undisturbed plants.