

but one year; it flowers, ripens its seeds, and perishes. The biennial lives two years; it produces herbage during the first year of its life, and flowers and seeds in the second. The second class contains the perennials, or plants whose lives extend over a longer period than two years: perennial herbs grow again from their roots, produce new flowering stems annually, and propagate their species by seed. The first class may be destroyed by cutting them down or pulling them up, immediately before or at the time of flowering, thus preventing the propagation of the species as well as killing the individual. The larger plants of this class are generally eradicated with less difficulty than the smaller species, which are not easily destroyed, since their seeds are so numerous that if only a few plants escape destruction they will produce seed enough to ensure a full crop of them the following year. Again, some annuals and biennials are not easily destroyed on account of the imperishable nature of their seeds, which will lie in the ground for years without having their vegetative properties at all impaired, but upon being brought by the plough or otherwise within the influence of the air, will germinate as well as if they had been the produce of the preceding year. Of the second class, some may be destroyed by the means employed for the eradication of the first class; all may be kept under by these means, since they will be prevented from reproducing their species by seed. But a great number of this class, in addition to propagating the species by seed, reproduce themselves individually by suckers, runners, or root-stocks (creeping roots), and constitute the most troublesome of all weeds, especially the last kind, which have "creeping roots," the smallest portion of which remaining in the ground will usually grow and produce a plant. Consequently, weeds of this description require that their roots should be entirely destroyed. This is not a matter of easy accomplishment; but it is absolutely necessary, in order to their complete eradication. Frequent and assiduous tillage of the soil, with the cultivation of root crops and clover, constitutes the most efficient means of destroying them.

## ANNUAL AND BIENNIAL WEEDS.

<i>Sinapis arvensis</i> .....	Wild Mustard, Charlock.
<i>Arcetium Lappa</i> .....	Burdock.
<i>Galium aparine</i> .....	Cleavers, Goose-grass,
<i>Euphorbia hysteroscopa</i> .....	Sun Spurge.
<i>Euphorbia hypericifolia</i> .....	Oval-leaved Spurge.
<i>Polygonum Persicaria</i> .....	Spotted Polygumn.
<i>Polygonum hydropiper</i> ....	Smart-weed, Water-pepper.
<i>Polygonum convolvulus</i> .....	Black Bind-weed, Climbing Buck-wheat.
<i>Bromus scaberrimus</i> .....	Rye Brome-grass, Chess.
<i>Senecio jacobaeifolius</i> .....	Fire-weed, Hawk-weed Groundsel.
<i>Bidens frondosa</i> .....	Burr Marygold.
<i>Cynoglossum Marisoni</i> .....	Beggar's Lice, Houndstongue.
<i>Cynoglossum officinale</i> .....	Burrs, Houndstongue.
<i>Achillea millefolium</i> .....	May-weed.
<i>Thlaspi bursa pastoris</i> .....	Shepherd's Purse.
<i>Cheilanthes alba</i> .....	Lamb's quarters, Goose-foot, Hog-weed.
<i>Amaranthus hybridus</i> .....	Amaranth.
<i>Verbascum thapsus</i> .....	Mullein.
<i>Xanthium strumarium</i> .....	Cockle-burr.
<i>Gnaphalium uliginosum</i> .....	Cud-weed.
<i>Panicum</i> (several species) .....	Panic-grass.
<i>Setaria glauca</i> (and other species) .....	Bottle-grass (Bristly Foxtail, Wild Millet)
<i>Lobelia inflata</i> .....	Indian Tobacco.

## PERENNIAL WEEDS.

<i>Galium boreale</i> (and other species) .....	Northern Bedstraw.
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<i>Polygonum aviculare</i> .....	Knot-grass.
<i>Ranunculus acris</i> .....	Crowfoot, Buttercups.
<i>Chrysanthemum leucanthemum</i> .....	Ox-eye Daisy.
<i>Cnicus arvensis</i> .....	Canada Thistle.
<i>Rumex crispus</i> .....	Curled Dock.
<i>Rumex obtusifolius</i> .....	Broad-leaved Dock.
<i>Rumex acetosella</i> .....	Field or Sheep Sorrel.
<i>Urtica Canadensis</i> .....	Canadian Nettle.
<i>Solidago</i> (numerous species) .....	Golden Rod.
<i>Aster</i> (numerous species) .....	Aster, Starwort.
<i>Potentilla</i> (several species) .....	Cinquefoil.
<i>Polypodium peltatum</i> .....	May Apple.
<i>Hypoxis perfoliata</i> .....	Common St. John's Wort.
<i>Gnaphalium Margaritaceum</i> .....	Everlasting.
<i>Achillea Millefolium</i> .....	Yarrow.
<i>Leonodon taraxacum</i> .....	Dandelion.
<i>Allium Canadense</i> .....	Wild Meadow Garlic.
<i>Allium tricoccum</i> .....	Wild Leek.
<i>Trifolium repens</i> .....	Couch-grass.

Of the weeds mentioned in the above lists, some are found chiefly in arable lands, others in pastures and meadows, while a few are abundant in both; hence the division into arable and pasture weeds has been made by some writers. The arable weeds have been subdivided into such as are injurious to the sample of grain; into this subdivision what are termed relative weeds enter, such for instance as oats in a crop of barley, rye in a field of wheat, &c. &c.; and into those which are injurious by incumbering the soil, depriving the growing crop of a large proportion of nourishment, and intercepting light and air: into this subdivision many grasses, of great value in their proper places, enter as relative weeds, together with other grasses of no worth under any circumstances. Among the pasture weeds some are occasionally pernicious, on account of their poisonous effects upon cattle that may chance to feed upon them, although such accidents are rare, as in general cattle instinctively avoid plants of this character. Yet the disorder called the slavers, so prevalent among horses at pasture during a certain period of the summer, is perhaps to be attributed to their feeding upon some acid weed. Another class of pasture weeds are particularly hurtful in sheep-walks, owing to their fruits being armed with small hooks, by means of which they adhere most tenaciously to the fleece, and materially impair its value where they are very abundant: of this kind are cleavers, bardock, burr marygold, hounds tongue, and cockle-burr. Some few plants are detrimental in pastures where cows are grazed, by imparting a peculiar flavour to the milk and butter, as garlic, &c., but such are almost exclusively confined to lands very recently reclaimed from the forest.

The botanical name of the iron-wood tree is *Ostrya Virginica*. It belongs to the Natural Order, Cupulifera, or Oak family. Linnaean class 21, Monœcia; Order 8, Polyandria.  
Toronto, May, 1849. N.

## THE COLD OF ELEVATED REGIONS OF THE EARTH'S SURFACE.

"Before the mountains were brought forth, or ever thou hadst formed the earth and the world, even from everlasting to everlasting, thou art God."—*Psalms*, xc. 2.

This artificial globe now presents a complete epitome of the surface of the earth, its atmosphere, and all the astronomical and meteorological varieties of its climate. We have its zones of temperature; its cold and heat, dependent upon elevation and aspect; its winds and storms; its clouds and sunshines; the vapours collecting around the summits of miniature mountains snow-