

from whence the seeds were brought to England. This in its native country rises to the height of twenty-five or thirty feet, with a strong stem, covered with a smooth bark, which in the young branches is green, but on the older it is of an Ash-colour; the root grows knobbed, and very thick. This, when young, is scraped and used by the inhabitants as Horse-radish is in Europe, having much the same sharp taste; the branches are garnished with decomposed winged leaves; those which are situated at the base have but three leaves, but above, the leaves are branched out into several divisions, which are again divided into smaller, having each five or six pair of oval lobes, terminated by an odd one; they are of a light green, and a little hoary on their under side. The flowers are produced in loose bunches from the side of the branches; they are composed of an unequal number of petals, from five to ten; they have ten short stamina surrounding the germen, which afterward turns to a long taper pod, including several angular seeds, covered with a thin membrane. These have a flavour like the root. These four sorts are natives of warm countries, so will not live through the winter in England, unless they are placed in a warm stove, and the pots plunged into the tan-bed. They are propagated by seeds, but those of the two first sorts are so hard, that unless they are soaked two or three days in water before they are put into the ground, or placed under the pots in the tan-bed to soften their covers, they will remain years in the ground without vegetating: when the plants come up, they will be fit to transplant in a short time; then they should be each transplanted into a small pot filled with light fresh earth, and plunged into a moderate hot-bed of tanners bark, shading them till they have taken fresh root; then they must be treated in the same manner as other tender exotic plants, giving them a large share of air in warm weather, and but little water; and when the plants have advanced to be too tall to remain in the frames, they must be removed into the bark-stove and plunged into the hot-bed, where they will make great progress, provided they have not too much water, especially during the winter season, for these plants are very impatient of moisture in cold weather.

The fourth sort requires the same treatment as those before-mentioned, but the seeds will grow without being steeped in water; and the plants are with difficulty shifted from one pot to another, for their roots are large, fleshy, and have but few fibres; so that unless great care is taken, all the earth will fall away from them, which often causes their stalks to decay almost to the root, and sometimes occasions the loss of the plants. This plant must be sparingly watered at all times, but particularly in cold weather, when moisture will cause them to rot in a short time.

The fifth sort grows naturally in Canada, from whence the plants were brought to Paris, where it has been some years cultivated; but about fourteen years past, it was first brought to England. This, in the country where it naturally grows, rises with an erect stem to the height of thirty feet or more, dividing into many branches, which are covered with a bluish Ash-coloured bark very smooth, and garnished with large decomposed winged leaves which are of the oval shape, very smooth and entire, but are ranged alternate on the midrib; these fall off in the autumn, and new ones come out late in the spring.

There are male and female of this sort in different plants; as these have not as yet flowered in any of the English gardens, so I can give no farther account of them nor of the fruit, having never seen any of them. This sort lives abroad in the open air, and is never hurt by frost. It is propagated by cutting off some of the horizontal roots, which will cause them to shoot upward, so it may be taken from the old root, and planted in pots, whereby the plant may be multiplied, or by suckers from the root. It requires a light soil, not too moist.

GUNDELIA. Tourn. Cor. 51. tab. 586. Lin. Gen. Plant. 828. Hacub. Vaill. Ac. Reg. Scien. 1718.

This plant was so named by Dr. Tournefort, in honour of Dr. Gundelicheimer, who found it in his travels in company with Dr. Tournefort in the Levant.

The CHARACTERS are,

*It hath an uniform tubulous flower, composed of many hermaphrodite florets, which are incircled by leaves. They have but one petal which is closed at the bottom, but swells at the top, where it is slightly cut into five segments: they have five short hairy stamina, terminated by long cylindrical summits. The oval germen is situated at the bottom of the flower, crowned by small scales, supporting a slender style which is longer than the petal, terminated by two revolving stigmas. The germen afterward becomes a roundish single seed inclosed in the common receptacle, which is conical, and the seeds are separated by a chaffy down.*

This genus of plants is by Tournefort referred to his twelfth class, which contains the herbs with flosculous flowers. Dr. Linnæus ranges it in the fifth section of his nineteenth class, intitled Syngenesia Polygamia segregata, which includes those plants whose flowers have a common empalement, and each of the florets are included in another.

We have but one distinct SPECIES of this genus at present in England, viz.

GUNDELIA. Lin. Sp. Plant. 814. There is no English title to this plant, but there are two varieties of it mentioned by Tournefort, which are supposed to arise from the same seeds, as they were found growing promiscuously together. These are,

1. GUNDELIA (*Tournefortii*) Orientalis acanthi aculeati foliis, floribus intensè purpureis, capite araneosâ lanugine obsito. Tourn. Cor. 51. *Eastern Gundelia with prickly Bear's-breech leaves, deep purple flowers, and a head covered with a down like a cobweb.*

2. GUNDELIA (*Glabro*) Orientalis, acanthi aculeati folio, capite glabro. Tourn. Cor. 51. *Eastern Gundelia with a prickly Bear's-breech leaf, and a smooth head.*

This plant was discovered by Dr. Gundelscheimer, in company with Tournefort, near Baibout in Armenia, but has since been found growing naturally in several places in the Levant, where it is generally found in dry strong land. The stalks of this plant seldom rise more than a foot and a half high; the under leaves are long, narrow, and sawed on their edges, their teeth ending in a spine; the other leaves are broader, which are irregularly slashed to the midrib, and armed at the points with sharp prickles; the stalks divide upward into several branches, which are armed with leaves of the same form, but are narrower; and each is terminated by a conical head of flowers, resembling those of Fuller's Thistle, being surrounded at the base by a circle of long, narrow, prickly leaves: these heads are composed of many hermaphrodite florets, which are shut up in the scales, each having an empalement, and a germen with five stamina surrounding it; but there are few of the seeds which ripen perfectly in each head, in the natural places of its growth. If rain happens at the time when the plants are in flower, the germen perishes, which is the case with several other of those plants whose flowers are collected into heads.

These plants are propagated by seed, which should be sown the beginning of March, in a warm dry border of fresh, but lean earth, in the place where the plants are designed to remain. When the plants come up, they must be carefully cleared from weeds; as they grow large, they should be thinned, leaving the plants which are designed to remain, about two feet asunder, that they may have room to spread. After this there is no other culture required, but to keep them clear from weeds; and if the frost should prove severe in winter, the plants should be covered with straw or Peas-haulm to protect them, but this covering must be taken off in mild weather; in two years they will produce their flowers, when they will make a fine appearance amongst other hardy plants in the pleasure-garden. They flower in May, and the plants lose their stalks and leaves in autumn, but their roots will abide many years.