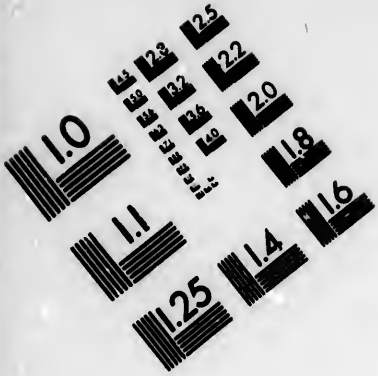


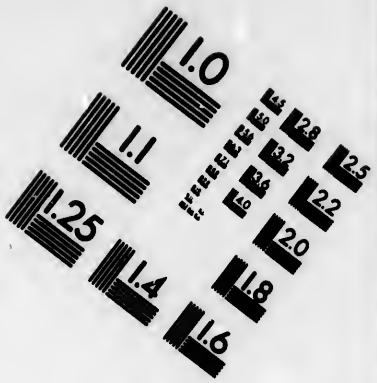
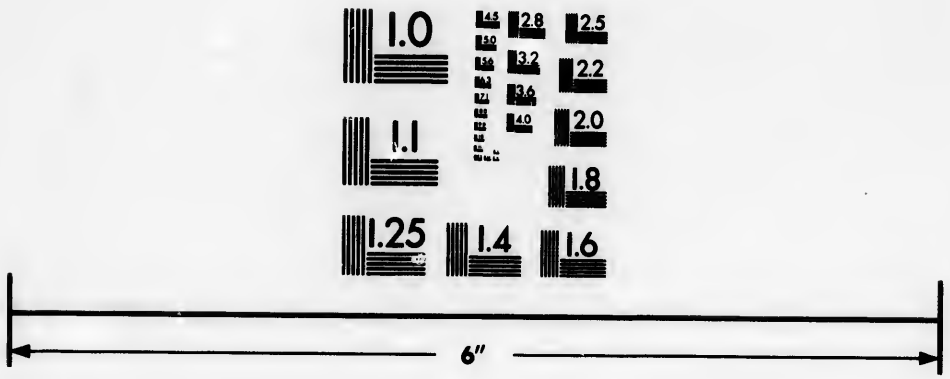
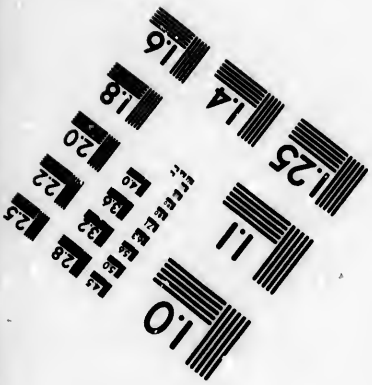


IMAGE EVALUATION TEST TARGET (MT-3)





Photographic Sciences Corporation

23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503

Technical and Bibliographic Notes/Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

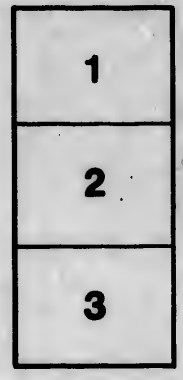
- ☐ Coloured covers/ Couverture de couleur
- ☐ Covers damaged/ Couverture endommagée
- ☐ Covers restored and/or laminated/ Couverture restaurée et/ou pelliculée
- ☐ Cover title missing/ Le titre de couverture manque
- ☐ Coloured maps/ Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black)/ Encre de couleur (i.e. autre que bleue ou noire)
- ☐ Coloured plates and/or illustrations/ Planches et/ou illustrations en couleur
- ☐ Bound with other material/ Relié avec d'autres documents
- ☐ Tight binding may cause shadows or distortion along interior margin/ La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure
- ☐ Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/ Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.
- ☐ Additional comments:/ Commentaires supplémentaires:

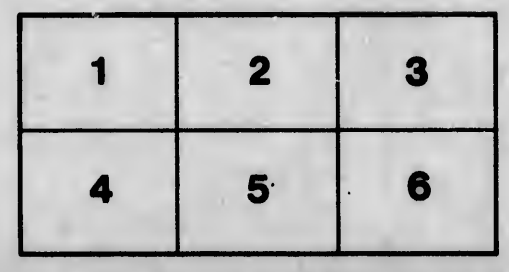
L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- ☐ Coloured pages/ Pages de couleur
- ☐ Pages damaged/ Pages endommagées
- ☐ Pages restored and/or laminated/ Pages restaurées et/ou pelliculées
- ☑ Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées
- ☐ Pages detached/ Pages détachées
- ☑ Showthrough/ Transparence
- ☐ Quality of print varies/ Qualité inégale de l'impression
- ☐ Includes supplementary material/ Comprend du matériel supplémentaire
- ☐ Only edition available/ Seule édition disponible
- ☐ Pages wholly or partially obscured by errata slips, tissues, etc., have been refilmed to ensure the best possible image/ Les pages totalement ou partiellement obscurcies par un feuillet d'errata, une pelure, etc., ont été filmées à nouveau de façon à obtenir la meilleure image possible.

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
					✓						





SOMEWHAT ABOUT A FEW

MEDICINAL PLANTS OF NEW BRUNSWICK.

BY DR. DUNCAN, OF BATHURST.

The following original paper, contributed by Dr. Duncan, was read before the Natural History Society, on Tuesday Evening, 5th inst.:— April 1881

Oxalis Acetosella.

One of the prettiest flowers that grows in our woods is the Oxalis Acetosella, or "wood sorrel." No sooner does spring awaken vegetation than, Phœnix like, the wood sorrel renovates the remains of last season's verdure and, under the influence of warmth and sunshine, carpets beneath the shade of the firs with a greenness all its own.

Take this specimen and let us examine its finely pencilled characteristics. In the old Botanists, by rare similitudes and antique but true phrases, is presented the life-like features of the plant, free from the technicalities of modern botany. Though unique the language is none the less plain or easily understood. "Wood sorrel is a lowe or base herbe, without staikes, the leaves do growe from the roote, (every one standing on a long foote staike), and, at their first comming foorth, are folden together, but afterwarde they spread abroade, and are of a faire greene colour, in number, three, and fashioned almost like the trefoyl, saving that each leaf hath a deep clift in the middle," and is heart-shaped, which trefoil is not. "Among these leaves rise up divers slender, weake foote-staikes, not growing above them, with every one of them a flower at the top," "almost made like little belles, of a white colour, with purple veynes all alongst," "or in some dasht over with a small shew of blush, and in some but on the backe side only." "The floure consisteth of five small leaves (petals), after which come little round knaps or huskes, full of yellowish seed." "The roote is very threddy, and of a reddish colour, not perishing in the year, but abiding with some leaves thereon in the winter." So saith Syte's "Dodoens," printed at Antwerp, 1578, supplemented by Gerarde and Parkinson. Alongside this, we may place those descriptive lines of Carlotte Smith—

> "Wood sorrel, with its light green leaves,
> Heart shaped, and triply folded; and its root
> Creeping like beaded coral;"

and those happy strokes—

> "Trim Oxalis, with her pencill'd flower,
> Close to the sheltring copse the maiden cleaves,
> And coyly plaits her purple-tinted leaves."

These leaves, thus purple-tinted on the under surface, are the old oxidised ones; occasionally they are blanched, and at times variegated white and green. Like clovers, they are sometimes in fours. On the claw of each petal is a yellow spot, five "fairy favours" in all. There are ten *stamens* a short outer row of five, and a longer inner series opposite the petals. One of these is mayhap the abortive inner corolla needed, so says Braun, to perfect the structure of the oxalis. The *sepals*, five in number, equal and persistent, are in dry situations converted into leaves. These miniature leaves are jointed on to red swellings, which are repetitions of the scales of the root-stem, and appear capable of propagating the plant in circumstances unfavorable for the production of seed. There are five *styles* pencilled at the apex or capitate. The *seed-vessel* scatters its contents in a remarkable manner. When ripe, the fruit, a membraneous pod, erects itself straight, and the slightest touch, even the wind, makes the seeds fly around, reminding

one closely of the *Impatiens fulva* or "spotted touch-me-not." The capsule is a pentagon having 5 cells and 5 valves, opening lengthwise and, with elasticity, down the corners, each cell containing one or two compressed striated *seeds*, which are arillated. The white fleshy aril, (or outer integument of the seed) ringed like a caterpillar, curls back at the maturity of the fruit and jerks the seed to some distance, sometimes accompanying it, and, after touching the ground, again rebounds and sends the embryotic plant, like an "April fool," "further on." Thus providing fresh soil not otherwise easily obtainable. What is commonly called the *root* is simply an underground creeping stem (rhizoma) and fleshy knobs that stud it are either the bases of fallen leaves or single bud-scales, giving origin to lateral buds, which like the terminal one, increase the network by which the plant is ever born anew.

The *leaflets*, like those of the *Mimosa pudica* or Sensitive plant, possess the remarkable property of self-moving. When those which are spread in a horizontal position, are stroked upwards or are pressed upon at the base they gradually droop. The same thing is noticed after plucking a portion of the plant. If placed in water some time elapses before it recovers its composure and permits the leaflets to again expand. An exotic species of Oxalis, the *Oxalis sensitiva*, is so remarkably irritable that its leaves contract at the gentlest touch, and is for this reason held in superstitious veneration in the East Indies, the priests employing it in their magic rites and as a charm against diseases too powerful for their skill. It has been observed that most of such *plantes irritables* are acid. An old writer remarks that the "leaflets close against rain," and another has it that "the leaves shut before rain and when it is fair open again." Linnæus, however, says they expand in rainy and contract in dry weather. At no time certainly have I observed the leaves more horizontal than in rain, the few that remained drooped, appearing to be influenced by the dry soil and had not yet been gladdened by a draught of nature's cordial. This is, as might be expected, in spite of Pliny's dictum to the contrary. Among his "Prognostica Tempestiva" he enumerates: "Trifolium quoque inhorrescere, et folia tempestatum subrigere certum est."

The *sleep* of the leaves is best observed by removing a portion of the plant into the house and placing it in water, when the leaflets will be seen to droop in rest at night.

The little white flower with its delicate purplish veins is a *Sun Worshipper*, following it during the day and looking towards it ere it sets, pays homage by folding up its blossom. It is also a good natural *Hygrometer*. This was noticed by Linnæus, who in his "Tour in Lapland" remarks: "Here also grew Hepatica and Woodsorrel. Their blossoms were all closed. Who has endowed plants with intelligence to shut themselves up at the approach of rain? Even when the weather changes from sunshine to rain, though before expanded, they immediately close." An old botanist, Fuchsius by name, states that, not only in his own experience, but in that of many others, an abundance of flowers in this plant foretokens copious rains and inundations for that year, if few, a drought. Last spring and throughout the whole year till late in autumn the Oxalis Acetosella flowered in abundance, hence, no doubt, the late floods and inundations.

The wood sorrel chooses northern exposures and shady cool woods, particularly those of pine and fir, where the light soil gives free access to its suckers. It loves also the mouldering trunks and roots of old trees, beautifying them in their decline and fall. It is everywhere plentiful around Bathurst, and flowers in June. It is found all over the northern regions of North America, Lake Superior, northerwards, south to the Alleghanies, and gladdens the botanist of Europe, equally in Lapland and the Alps, as in the heath-clad Cheviots (hence not confined to woods) There is a pretty *pink* variety, which I have seen several times. It is the variety "flores purpures" in Ray's Synopsis. Camerarius considered this to be male and the white the female plant—so little were the sexes in plants known to the older writers. De Candolle mentions a *blue* variety.

It has long been in *use* as a salad. Dr. Wm. Turner, one of the earlist English botanists, (1562,) reckoned it "very good to make salettes of." Linnæus avers that the acidity of the leaves is more agreeable and delicate than that of a lemon. Philip Miller recommends a border of it in every kitchen garden.

From an early period wood sorrel has been a member of the *Materia Medica*. It is described as refrigerant, antiscorbutic, diuretic and antiseptic. Of its stomachic effects mention is made as far back as Pliny, whom Gerarde thus paraphrases "Sorrell du Bois or wood sorrell, stamped and used for green sauce, is good for them that have sick and feeble stomachs; for it strengtheneth the stomache, procureth appetite, and of all sorrel sauces is the best, not onely in vertue but also in pleasantnesse of his taste." It is still used on the continent of Europe as a fish sauce, and as a substitute for lemonade. From its leaflets resembling the heart it has been regarded as a cardiac, but, like most Frenchmen around Bathurst, the old physicians appear to have confounded heart and stomach, so that what comforted the one cheered the other. The practitioners of Germany write, that "the distilled water of Alleluya cooleth well and comforteth the heart, and quencheth thirst and that it is good in all hote diseases and inflammations. They hold also that the distilled water of Wood Sorrel is good to be tempered with alumn for the wounds and sores of the mouthe." Infused in milk, to form whey, or as a tea it is said to be used in putrid and other fevers with good success. The leaves and stalks, wrapped in a cabbage leaf and macerated in warm ashes until reduced to a pulp, have been applied to scrofulous sores. It is recommended by W. H. Taylor (Lancet, June 5th, 1869), as extraordinarily efficacious in scurvy, having effected cures after lemon-juice had failed. The fresh plant may be eaten raw, or 4 grains of the Quadroxalate of Potash, a salt obtained from its expressed juice, may be used three times a day.

The juice reddens vegetable blues, coagulates milk and instantly precipitates lime from its solutions. It owes its acidity to the super or *Binoxalate of Potash*, which is crystalised from the expressed juice, and sold as "*Essential Salt of Lemons.*" The French name it "Salt of Sorrel." Like Oxalic Acid it is poisonous. It is frequently (*very* I may truly say) adulterated with Cream of Tartar and, somtimes, Sulphuric Acid or Vitriol and Cream of Tartar are subutituted for it. It is used to take iron moulds and ink stains out of linen, and as a test for the presence of lime

The Wood Sorrel is now pretty generally considered to be the ancient Irish *Shamrock*, into an examination of its claims, however, I shall not enter.

The Generic name *Oxalis*, adopted by Linnœus, did not belong to this plant, but was given to a species of Dock by Dioscorides. Pliny's name, Oxys, which like Oxalis, means sharp-pointed or metaphorically acid, or sour, is that made use of by the older botanists. *Acetosella* (little sorrel), preserved in the French "la petite oseille," seems to have been used by the Pharmacopœias, in order to distinguish it from Acitosa the sorrel proper. It bears the same name in German, French, Spanish and Italian, and among nicknames may be mentioned "*Cuckoo's bread*," "*Gowk's meat*," (Scotch) "*Woodsour*," "*Stubwort*" –from its growing on old roots and stumps (stubs), and "*Alleluya*"—one of its oldest English names, given to it in Roman Catholic times, owing to its appearing in blossom between Easter and Whitsuntide, the season at which the Psalms ending with that word were sung. The Welsh call the flowers, "fairy bells," and believe that they ring the merry peals which call the elves to "moonlight dance and revelry." "Whence hast thou won thy names thou simple flower?"

* * * * * * *

"Thin ancient, solemn title, sure was given,
Pale *Alleluia*, by grey monks of old,
What time the chanted service rose to Heaven,
When paced the brethern forth, barefoot and stoled.

* * * * * *

To far-off fanes in hoary forest hid,
Where pealing bells for Easter masses rung.
"It chanced upon the good St. Patrick's Day,
A warrior, wounded, fell with riven crest;
Thy little careless plant bloomed where he lay,
And hope reviving sprung within his breast.
'Erin-go-bragh'—he pluck'd the trefoil'd stem,
And vow'd a vow by holy Patrick's shrine,
A *Shamrock* chaplet for a diadem,
Erin's, green Erin's burnish'd helm should twine.
Then came some village leech, down-bent and old,
And placed thee in his widely-gather'd store.

* * * * * *

Though long he mused upon thy healing power,
The names he gave—uncouth they were and rude;
'*Stubwort*' he call'd thee, '*Oxalis*,' '*Woodsour*,'
That by his skill the cooling draught imbued.
The unlearn'd peasant loves thy fragile form,
And Gipsy children seek thy mossy bed,
When days are long, and April suns are warm,
They laugh and say, thou art '*The Cuckoo's Bread.*'"

Anemone nemorosa—Wood Anemone.

Of spring favorites none prettier than the
"Courageous windflower, loveliest of the frail."

Not so symmetrically leaved as the oxalis, by its greater size and the profusion of its blossoms, it catches the eye more readily. What more attractive sight than a bank robed in white Anemones—the "flor stella," floral star of the Italians. A happy fancy caught by Charlotte Smith—

There, thickly strewn in woodland bowers,
Anemones their stars unfold."

And Mrs. Hemans—

"Dost thou see," she asks—
"Where southern winds first make their vernal singing,
The star-gleam of the Wood Anemone?"

The flowers give out their fragrance, thought by some to be as choice as that of the viola odorata, to the roving wind, which wantonly scatters it abroad, informing us of their presence, long before seen.

Let us examine the specimen. Like the Oxalis it is perennial with single radical *leaves*. Those of the stem, three together, whorled, forming an *involuere* remote from the flower (which is apetalous), and by long petioled, three divided, toothed and cut: the lateral divisions often two parted (variquinque folia). The *sepals*, 4 to 7 in number, are oval, white—the pale anemone—sometimes tinged with purple outside, so that though at first plain looking, it gathers fresher tints as it matures and at length wears a blush of beauty on its modest cheek, gracefully pendant as they "wait the breathing of the wind." The sepals "close together in rainy weather, and the flower hangs downwarde" to "shun the impending shower." At times may be noticed one of the sepals partially or wholly converted into a green leaf; and a flower-stem in its development upwards will now and then steal away one of the triple leaflets of the involucre, and wear it as a trophy under the seed-carpels It is said that purple varieties are common. Blue and double varieties abound near Wimbledon, of "Kolapore" fame, but I have neither seen nor heard of their being seen in New Brunswick. The blue species—*Anemone Appennina* frequents the groves and thickets of Italy. During some seasons there is quite a scarcity of blossoms, generally due to drought, but sometimes due also to the unpreparedness of the root-stock after particular seasons, to produce a flower-stem. The *root-stock* is like a piece of stick dead at one end. It creeps "longwise under the upper crust of the ground, spreading out its divers small knobs like branches, of a dark brown color outside," and a section showing "white within." According to Braun it prolongs its subterranean growth, with alternations of leaves and bud-scales for several years before it arrives at a flower terminating the shoot. "The number of annual bud-scales on the horizontal root-stock increases from year to year, rising gradually to 8, and each of these preparatory sections terminate with a single long-stalked leaf, till, finally, the last section, after producing its proper number of bud-scales, rises into an erect shaft, producing the three-leaved whorle of stem leaves and the nodding flower." How very little do we think, while heedlessly plucking one of the blossoms, that, by so doing, we in a moment destroy the elaborate preparation of years! This explains why, when under cultivation in our gardens the plant cannot bear to be much shifted, and

why it does not flower freely or in perfection unless left to extend itself undisturbed.

Habitat.—The wood anemone flourishes from Canada to Carolina, and on both sides of the Rocky Mountains. Though found in abundance around Bathurst, it is somewhat rare in our northern counties, and more common in the southern ones. It prefers the margins of woods and flowers with the coming of the swallow in May. The variety with the leaves five partite (a quinquefolia) ranges from Virginia to near Lake Winnipeg. This plant is fairly scattered over Europe, being equally well known in Great Britain and France as in Germany and the Swiss Alps. English poets write lovingly of the "frail and fair anemone." Thus writes Merritt:

"The queen of spring flowers—wood anemone,
In sylph-like pride;
I love that flower, most delicately fair,
So fondly bending on her slender stay,
As though in love with her own leaves; and where
In field or greve
Be leaves so exquisitely wrought as they?—
Chaplet for love."

Our own poets admire it no less warmly. Thus Hoffman longs for

"The breese that calls
The Wind-flower by the hillside rill,"

to lift the tresses from his true-love's cheek,

"And let me see the blush divine;"

for who doubts that our "ladies faire" have, as Bryant puts it,

"Eyes that shame the violet,
Or the dark drop that on the pansy lies,
And foreheads white as when in clusters set
The anemones by forest fountains rise;
And the spring beauty boasts no tenderer streak
Than the soft red on many a youthful cheek."

NAMES.

"*Anemone*" occurs in Hippocrates and Dioscorides. It is derived from the Greek "Anemos," the wind, for the "floure doth never open itselfe but when the winde doth blow," as Pliny writes, or, in the words of Horace Smith,

"The coy anemone, that ne'er uncloses
Her lips until they're blown on by the winds."

According to an ancient legend the anemone is said to have sprung from the tears shed by the Goddess of Love when she wept o'er the body of Adonis:

"Alas the Paphian! Fair Adonis slain!
Tears, plenteous as his blood she pours amain;
But gentle flowers are born and bloom around
From every drop that falls upon the ground;
Where streams his blood there blushing springs the rose,
And where a tear has dropped a Wind-flower blows."

—Bion's Idyl.

It is doubtful if our Anemone is the same as the classical one. It is applicable, however, to plants of several different genera under present arrangements. Dr. Prior thinks it was the Cistus or rock-rose. The specific term *nemorosa* (in the sense of pertaining to a wood), is found in the *Ranunculus nemorosus* of Fuchsius. The French still retain the sense—a relic, doubtless of some ancient impress given to popular opinion—in the pretty term Sylvie. The Anemone of Dioscorides, whatever it was, he commends for ocular diseases, as does Pliny and Galen. Our plant has inherited part of its virtues, otherwise the Germans would not have termed it "*augen wurtz* eye-herb," i. e., and is said to "take away the scares and scales which grow on the eyes." It is also called in German "*stork flower*," both being equally hailed as the harbinger of spring."

In ancient times the anemone had a great reputation for its *medical properties*. Magicians ordered every person to gather the first they saw in the year, at the same time repeating the following formula:—"I gather thee for a remedy against disease." It was then carefully preserved, and in the event of the gatherer being ill was tied around his neck or arm, as this was supposed to drive away the malady. The leaves possess such an acridity, resembling in this respect other Ranunculaceæ, as to be in some measure *poisonous*. They have been used as a substitute for Cantharides in raising blisters, "producing not only a more speedy, but less painful effect" (Willich). It is said to act as a poison to cattle, producing bloody urine and convulsions. Cows naturally reject the plant, but eat it inadvertently when shifted from the fields to the woodland pastures, where it is common. It is stated to have proved a speedy cure for Tinea Capitis or Scalled Head, the bruised leaves being applied twice daily. The active principle of the Anemone is *Anemonine*, a champhor-like crystalline body. It is colorless and shining, tasteless and neutral, and possesses powerful toxic properties. Anemonine is found also in *Anemone pulsatilla*, *Anemone pratensis*, *Ranunculus Flammula*; *R. sceleratus*, *and R. bulbosus*. In half to one grain doses it is very useful in irritative, cough, asthma, and whooping cough. It is a favorite remedy of the Homeopathists (as Pulsatilla) and exerts an alterative influence on the mucus membrane generally, rendering it useful in ophthalmic cases, in catarrhal inflammation of the nostrils, throat and respiratory passages.

It was my intention, when I began this paper, to have included in it a larger number of plants; and had selected for the purpose, among others, the "*Sundew*"—*Drosera rotundifolia*, the new and successful remedy for whooping cough, and whose digestive properties are now well known since Darwin's observations on it, and "*Eyebright*"—*Euphrasia officinalis*, a popular remedy in diseases of the eye, and almost a specific in acute nasal catarrh (cold in the head), a few drops of the tincture, taken at the onset of the affection and repeated every two hours, cutting it short; but my leisure moments in the midst of a large country practice, have been so few and far between, that up the last minute I have only succeeded in completing the foregoing. I have not treated the subject from a purely medicinal standpoint, trusting in that way to make it rather more interesting to a not altogether professional audience. Should my remarks be the means of stirring up an interest in our "weeds" popularly so called, so many of which are of considerable value in combatting disease, I shall feel amply repaid for the time spent on this.