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WINTER WILDFLOWERS

HELEN V. SMITH

Michigan Botanical Club
Special Publication No. 2



PHOTOGRAPHS BY

R. L. Arthur
James P. Bennett
Robert Campsmith/Kalamazoo Gazette
Kenneth Coles
John R. Dice
Al Dorn
Beatrice Dunn
Donald R. Farrar
Ursula Freimarck
Louise Funk
E. Harkaway
June Hicks
William F. Hopkins

F. Hostman
C. E. Lewis
T. L. Mellichamp
Marilyn Parker
Richard W. Pippen
Henry Platz, Jr.
Michael Rogers
John S. Russell
Alexander H. Smith
Barbara Thirtle
R. E. Whiting
James A. Weber
Yvonne Wilson

Sketches by Wolfgang L. Hauer



Preface

This booklet is the second in the Special Publication series of the Michigan Botanical Club. When reviewing possible subjects for a second publication it was decided by the Board of Directors that an illustrated booklet on the appearance of herbaceous plants in winter would deal with a relatively unexplored area. The booklet as presented here does not pretend to be more than a layman's introduction to the remains of last season's flowers, fruits, and vegetative parts, but perhaps sets the stage for more detailed studies.

Collecting the materials to be photographed was a Club project but actually taking the photographs fell to the lot of those interested in photography. The membership cooperated enthusiastically. Several workshops for taking pictures were held and many individuals worked separately. The Michigan Botanical Club is very appreciative of the interest shown by the Photographic Guild of Detroit and the Nature Photography Club of Ann Arbor and for their help with the photographs. Both groups organized special workshops to take pictures for this project. Special thanks are due to the many (about 40) photographers who submitted pictures. For some species we had as many as 10 good photographs—which made the final selection very difficult. Those whose photographs have been used are listed on the inside front cover.

Publication of this booklet is being financed through the Special Publication Fund established by proceeds from the first publication in this series, "Some Common Mushrooms of Michigan's Parks and Recreation Areas." All proceeds from sales of this second booklet will be returned to the Special Fund and after publication costs are met will likewise be available for other publications on Michigan botany and/or the purchase of plant sanctuaries in Michigan.

It would have been impossible to carry out this project without the use of the facilities of the University of Michigan's Matthaei Botanical Gardens. We wish to acknowledge the enthusiastic support of Professor Warren H. Wagner, Jr., former director, and Professor Erich E. Steiner, present director, for this project.

The Michigan Botanical Club "Winter Wildflower" booklet committee consisted of Charles H. Buswell, Bruce P. Dancik, Wolfgang L. Hauer, William F. Hopkins, Helen V. Smith, chairman and author, Edward G. Voss, editor, and Warren H. Wagner, Jr.

H.V.S.

March 1, 1973

Introduction

Most of us are aware of the beauty of wildflowers in the spring, summer, and early fall, but do not realize that interest and even beauty are to be found in the stark remains of the plants in the late fall and winter seasons. The purpose of this booklet is two-fold: first, it tries to show those interested in the out-of-doors that herbaceous flowering plants have unique and identifiable form even in the winter condition; second, it attempts to show that, surprising as it may seem, many of these dried remnants have a certain attractiveness in their own right.

Numerous books and articles have been written to enable the user to identify woody plants by twig and bud characters. These characters are not present on the remains of herbaceous flowering plants. The approach used in this booklet is what might be called the "eyeball" method of identification, i.e., the user simply compares his specimen with the photographs until a satisfactory match is made. If such a match cannot be made, it is to be assumed that the material in hand is not illustrated in the booklet. The species included here are only a sample of the more conspicuous ones, with a few vines, found in the Great Lakes region.

The attractiveness of dried plants is not that of the beautiful colors of the flowers (the dried plants are usually some shade of brown) but rather of their diverse and interesting form. This great diversity of form has made them popular over the years in plant arrangements. When collecting these dried remains one need not feel guilty about interfering with the survival of the species, as is often true in the picking of wildflowers. In most cases, the dried specimens have already dispersed their seeds. However, before collecting plant specimens check to see that you are not violating any regulations as some parks and recreation areas prohibit the collection of plant material without special permission. Woody species such as Bittersweet (included here as a shrubby vine) are specifically protected by law against picking.

The parts of the plant with which we are concerned are the fruiting parts and their supporting structures. The destiny of the plant is to produce seeds which serve to propagate the species. Seeds are produced in the innermost part of the flower, in the ovary or ovaries. It is the seed which germinates to produce the new plant. Associated with the ripened seeds are

the matured ovaries in which they are produced; the ovaries and any other parts of the plant adhering to them in the ripened condition are referred to here as the fruits. Different plants have different ways of packaging and dispersing their seeds. Seeds may be "packaged" in either dry or fleshy fruits. In winter we are primarily concerned with dry fruits of various kinds. These take a variety of forms and consequently have been given a variety of names. Botanical terminology is generally avoided in this booklet but a few terms need to be explained. A "capsule" is a dry fruit which normally splits open along two or more definite lines (sutures). The term "pod" is used here to cover the specialized fruits to which botanists have given the terms "legume" (like a pea-pod, splitting on two sutures) and "follicle" (splitting on one suture), both derived from an ovary composed of a single carpel (or basic unit) and containing a single cavity or "cell." The term "spike" refers to an elongate flowering or fruiting stem on which the flowers or fruits are attached directly, without individual stalks. A "head" is a compact cluster, often globose (spherical) or nearly so.

Methods for dispersal of seeds vary tremendously. In some species the seeds or fruits merely fall to the ground near the parent plant. Many seeds are eaten by birds or other animals and some pass through the digestive tract in viable condition. Many of the species illustrated here have fruits with some kind of opening through which the seeds are tossed out by the action of the wind. In some, such as Milkweed, which has a tuft of hairs attached to the seed, the seeds are blown away by air currents. The parachute-like arrangement on the nutlets of a Thistle perform similarly. Still other plants produce what we refer to as "stick-tights" (for obvious reasons): seeds or fruits covered with spines that stick to the fur of animals or the clothing of people and thus are carried to new localities by this means.

In addition to the seeds providing for the propagation of the species, they have a very important role in nature's scheme as they provide food for birds and small mammals throughout the winter. It is a rule of nature, one might say, that far more seeds are produced than are needed to cover the earth by a particular species. This excess is thus available to other organisms, who, in turn, usually help in dispersing the seeds.

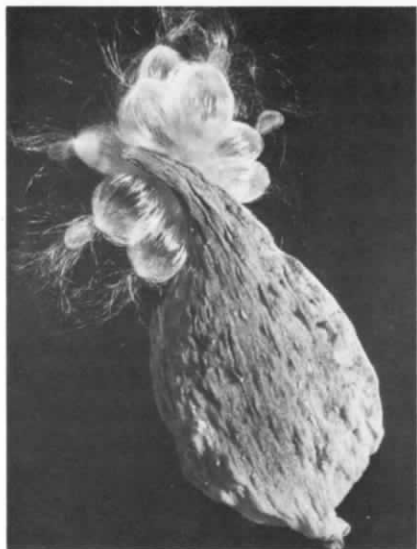
When collecting specimens for decorative arrangements, one needs to exercise considerable care in handling and transporting them for they are often very brittle. The method of treatment will, of course, vary with the type of specimens in hand and the use to which they are to be put. Cat-tails can be rolled in large sheets of newspaper and laid out flat in the back seat of the car. A very effective way of handling specimens that are profusely branched and delicate is to have a shallow carton or two and a generous amount of modeling clay (or the equivalent). Setting each specimen in a separate wad of clay, place them upright in the carton so that their branches do not touch each other. For less delicate material, we often place two or three species in a large paper bag and place the bags in a large market basket. To remove the

specimens, slit the bag open with a scissors. Soft-drink bottles have been tried as a holder for single fragile specimens but they tip over very readily unless they are braced.

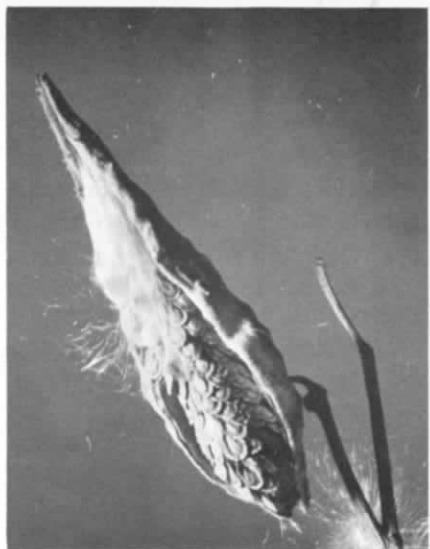
In collecting for arrangements one does not wish to be limited to the remains of plants which persist into winter. Goat's-beard, for instance, must be collected in summer or early fall when the fruiting heads are still complete. The technique for handling such a delicate object is to spray the heads with hair spray or a plastic spray before you collect them. This technique keeps them from disintegrating so readily. Heads treated in this way will last through the winter in arrangements. Collecting specimens for winter decoration or study may be done over a period of several months. Cat-tail and Pearly Everlasting should be collected early, preferably June for the former and whenever the flowers are in bud for the latter. Specimens of Pearly Everlasting should be hung with the heads down to air-dry. In contrast to the early collecting periods of the above-mentioned species, Queen Anne's Lace can be collected well into the winter and even spring in fairly good condition. Most of the photographs reproduced here were taken of naturally dried material collected between early October and mid-January. Late fall is recommended as the best general collecting time, since early heavy snow will break down many of the delicate plant remains, and by mid-January the ravages of winter have normally taken their toll—or the plant remains are buried in the snow.



Platz



Whiting

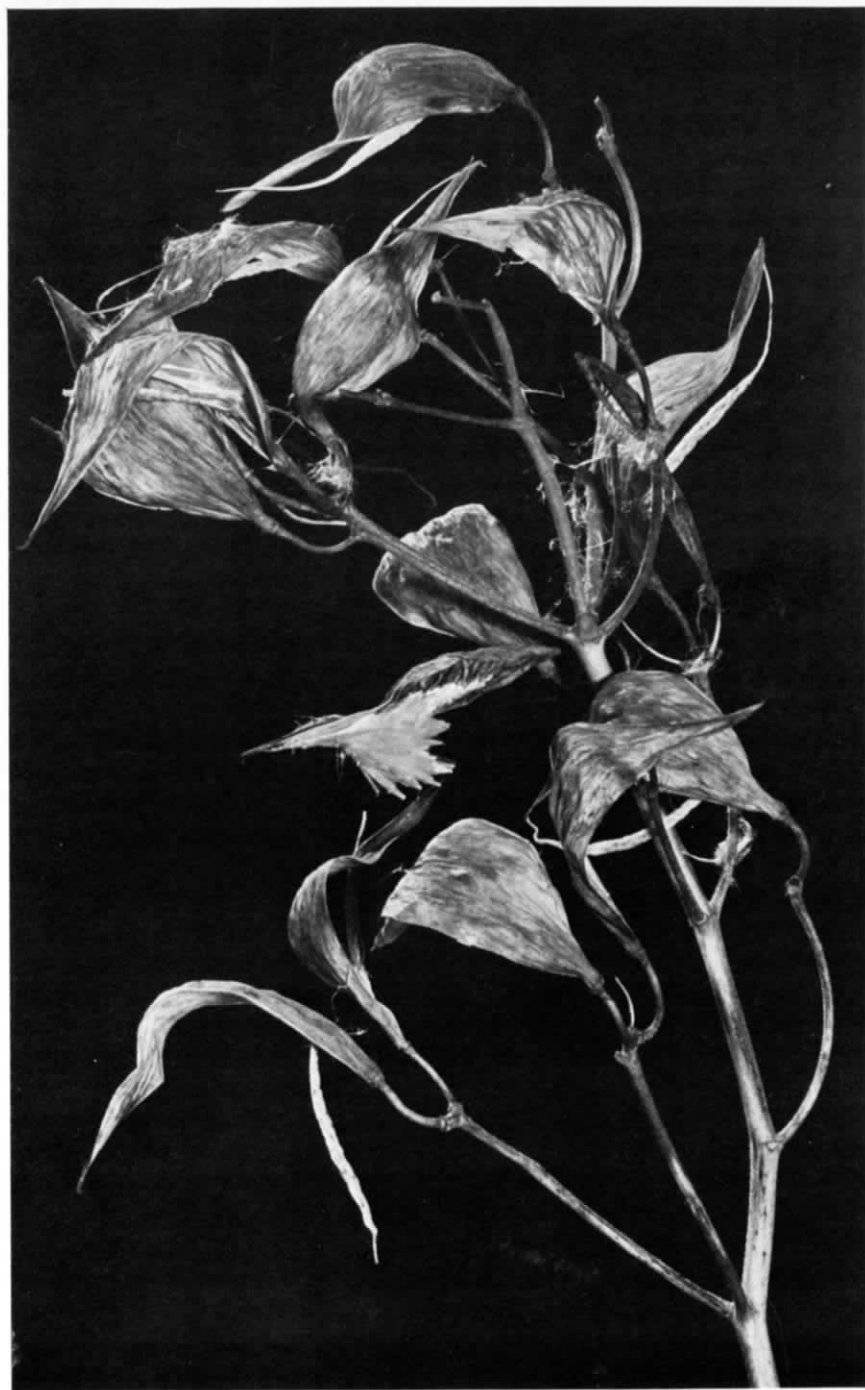


Hicks

Milkweed

The Common Milkweed (above and previous page) in fruiting condition is known to nearly everyone by its large persistent warty pods which split along one side, allowing the seeds to escape. The small, brown, flattened seeds bear a tuft of long silky hairs which makes them easily blown about by the wind. The greenish purple flowers are borne in large globose clusters in summer. This species is common in fields, meadows, and along roadsides, and is frequently used as a winter decoration. The Swamp Milkweed (right) has smoother pods and grows in wet places. Partly opened milkweed pods may be sprayed, like goat's-beard seed-heads, to retain the fluffy appearance.

Asclepias



Platz



Platz

Dogbane

The fibrous stems and long slender pairs of pods, which split open to release the small seeds with their tufts of silky hairs, characterize this species. The hairs allow the seeds to be airborne for dispersal just as in the milkweeds to which Dogbane is closely related. In summer the milky juice and clusters of small bell-shaped flowers are characteristic. This species grows in open ground, often along roads and woodland borders.

Apocynum



Hopkins

False Foxglove

The ascending, ovoid capsules have 2 cells and split open at the apex, permitting the escape of the seeds. They are borne on short stalks along the ends of the branches and may be smooth and shiny or covered with fine hairs depending on the species. The yellow flowers are rather large and conspicuous. The plants are usually branched and may be as tall as 3 feet. False Foxglove grows in woods as a parasite on oak trees.

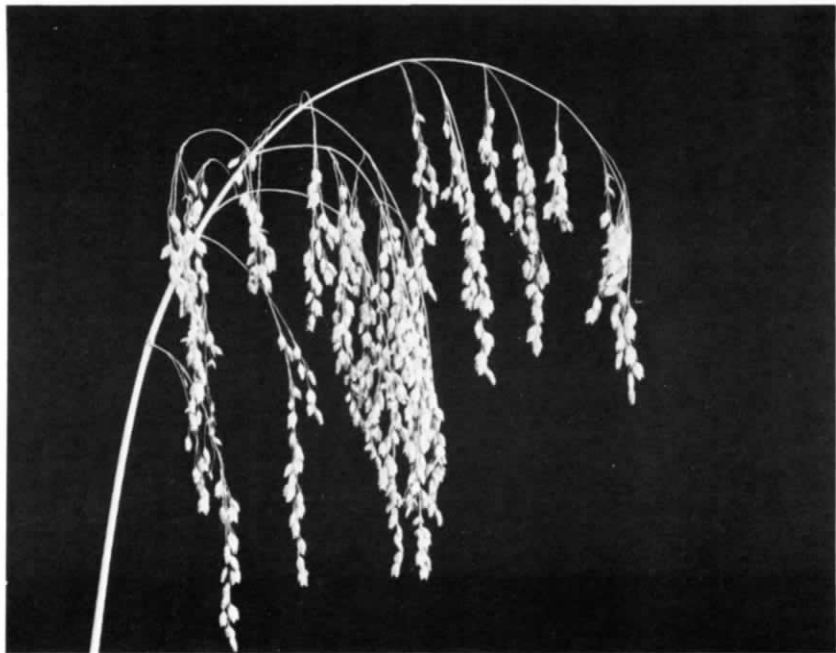


Pippen

False Indigo

The drooping, papery to woody, inflated, 1-celled pods on short stalks arising from the main flowering stalk, make False Indigo easy to recognize in winter. In summer the false indigos are characterized by the clusters of white or yellow pea-like flowers. The leaves have 3 leaflets arising at the same point. The plants may be up to 3 feet tall, and grow in dry open woods, in clearings, and on prairies.

Baptisia



Smith

Manna Grass *Glyceria*

Manna Grass is a good example of a decorative grass, the large drooping panicles of which can be used to good advantage in winter bouquets. This is a perennial grass of marshes, shallow water, and wet ground and the grains are used as food by wildlife.



Russell

Reed *Phragmites*

This, our tallest native grass, may grow to 12 or even 15 feet high. It has large, dense, much branched terminal clusters of small flowers and later fruits with conspicuous tufts of silky hair. The stems have broad leaves, and grow from underground rootstocks or from above-ground runners, forming large dense colonies in shallow standing water, including ditches and lake borders. The plants persist well into the winter and are often used for decoration.

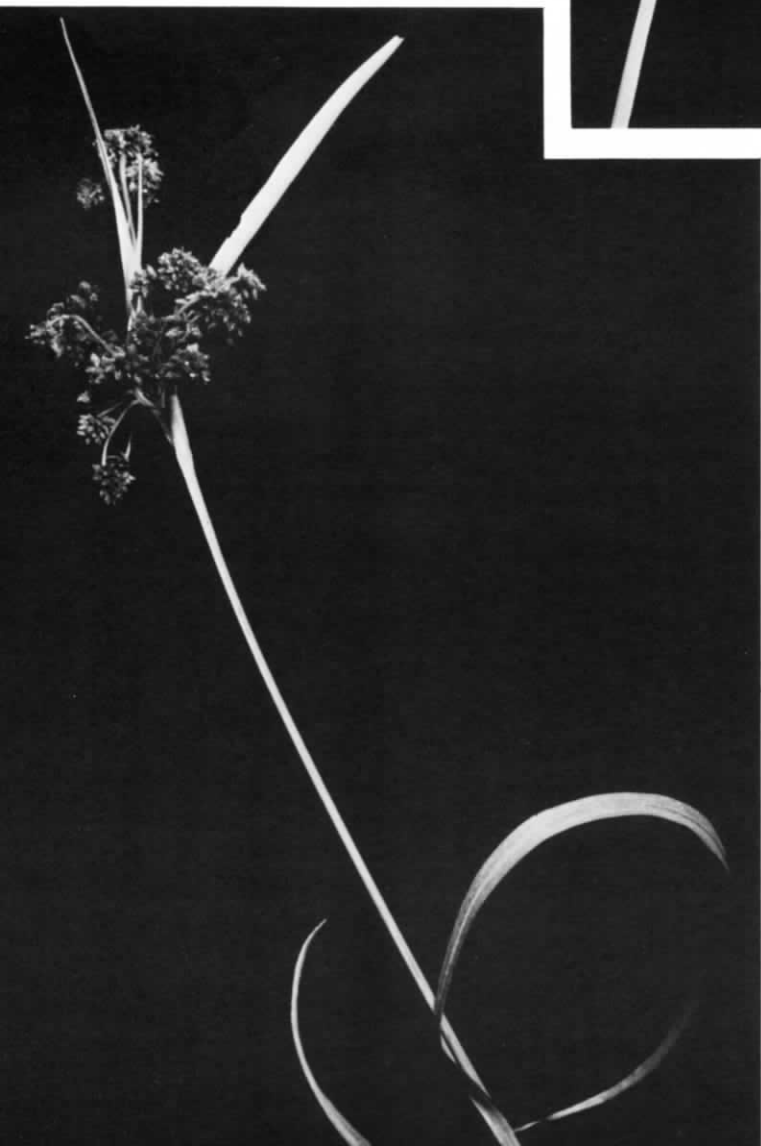


Hopkins

Wild Rye *Elymus*

Wild Rye illustrates one of the many species of grass of which we have such an abundance. Grasses have hollow stems, circular in cross section. In sedges, which look somewhat similar, the cross section is often triangular. The mature fruits of grasses are grains, much used as food by both birds and mammals. Wild Rye bears its flowers in dense terminal spikes, and grows on sandy shores, in thickets, and along streams.

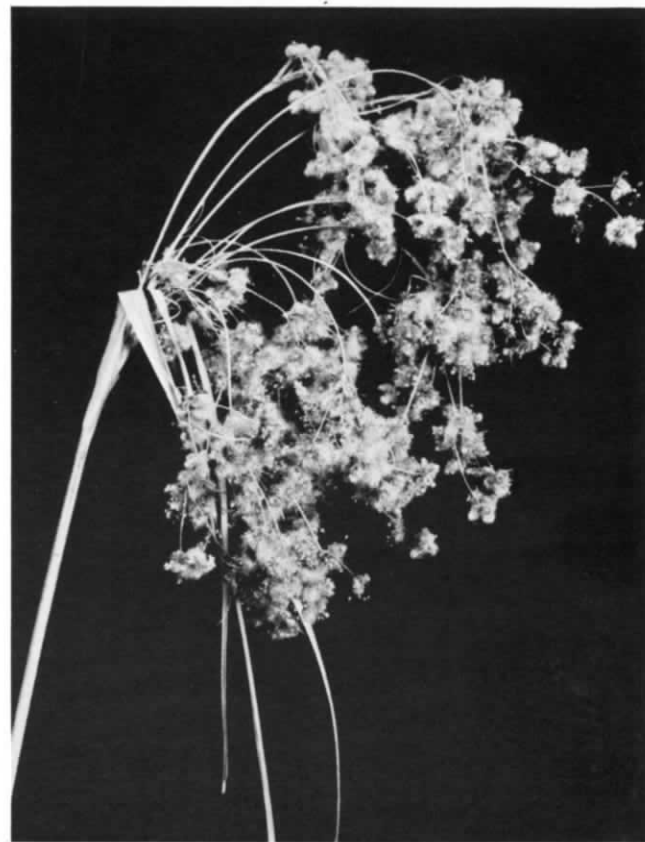




Rogers



Smith



Smith

Sedges

Unlike the grasses, which have similar leaf blades, sedges have stems that are solid and often triangular in cross section. The identification of sedges is usually difficult. However, they are a common and readily available source for winter decoration.

Carex with 169 species is the largest genus in the Michigan flora. One species (*C. comosa*), in the upper right on the facing page, is among our most attractive and characteristic. Like most species it grows in damp places.

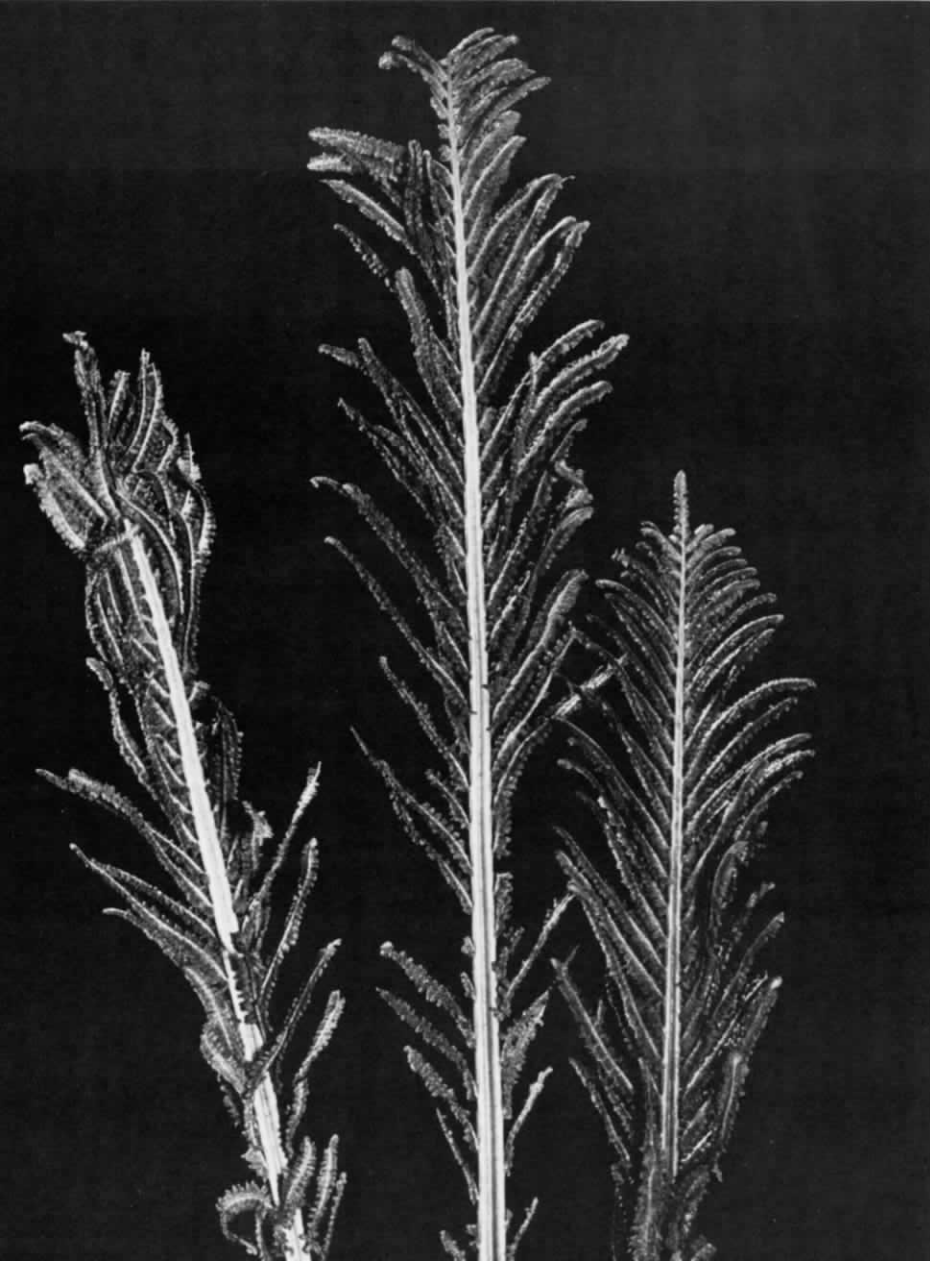
The bulrushes (*Scirpus*) include the woolgrasses (above) with fruits in compact ovoid heads which become woolly in age. Unlike the drooping heads of the Woolgrass, those of the species at the left are in more compact globose clusters of heads and are not woolly.

Ostrich Fern

Matteuccia

The fronds arising from the underground rootstock of this fern are of two kinds—the ordinary sterile green fern fronds and the brown fertile or spore-bearing fronds which are shown here. The spores are borne in small globose spore-cases along the edges of the modified leaflets. These fronds arise from the center of the vase-like crown of green ones. Ostrich Fern grows in moist rich woods and in swamps.

Platz



Mellichamp

Sensitive Fern

Onoclea

Like the Ostrich Fern this species has two types of frond, the sterile green one and this fertile frond which lasts well into the winter and which bears the spores. The fertile frond consists of a stalk with nearly erect branches which are edged with the globular spore-cases. Both of these types of frond grow from the same underground rootstock. The fertile ones are often used in winter arrangements. This fern grows in low open ground and woods.



Thirtle



Rogers

Yarrow

This aromatic member of the sunflower family is recognized by the simple or somewhat forking stems which bear rather large convex or more or less flat-topped terminal clusters of small fruiting heads. The stems, which may be up to 40 inches tall, arise from underground rootstocks and may form sizeable colonies. In the summer the small white-rayed heads with yellow centers are frequently seen along roadsides and in waste places. The generic name honors Achilles, who is said to have discovered the healing powers of this plant.

Achillea

Water-plantain

Water-plantain has a tall fruiting stalk with whorls of slender branches which in turn bear smaller whorls. The small terminal heads are doughnut-shaped and consist of a circle of flattened seedlike nutlets. The small white flowers bloom in summer. The plants grow in shallow water and low wet ground, and may attain a height of 6 feet.

Alisma



Gentian

Gentiana

This low-growing perennial with the deep blue flowers borne upright at the ends of the stems can be recognized in winter by the upright, cylindric, two-parted capsules. The withered remains of the 4 or 5 petals, and below them of the sepals, are remnants of the former glory of the summer beauty. Gentians usually grow in wet sunny places or in wet thickets or woods, and all are protected by Michigan law.



Parker

Parker

Wild Onion

Allium

There are several species of Wild Onion and Garlic. Most of them produce flowers in an umbel, i.e. a cluster of flowers each with its own stalk arising from essentially the same point at the end of a stem. The flowers produce small capsules which open into 3 sections to permit the discharge of the seeds. Some species such as Wild Garlic (above) produce small bulbets along with or in place of flowers.

Parker



Smith



Smith

Chicory

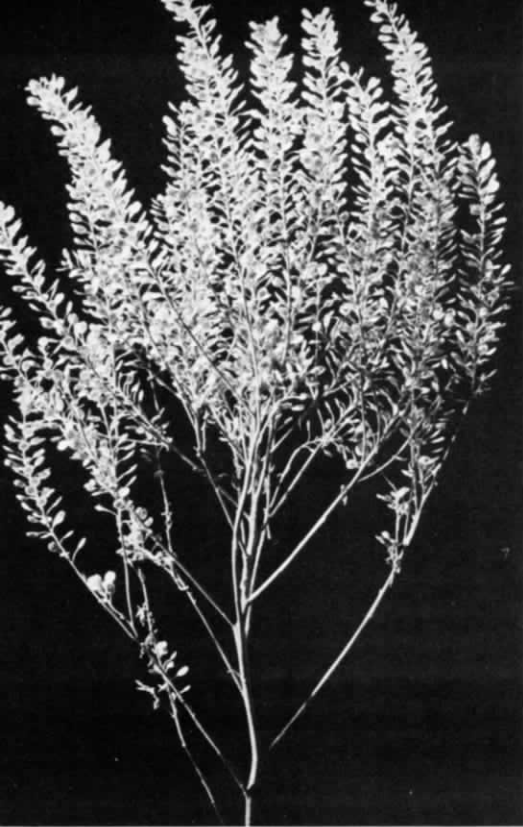
Cichorium

These stiffly branching plants are conspicuous but unattractive in the winter landscape. The clusters of flower-heads in the axils of the leaves or at the ends of short thick stems appear in winter as somewhat ragged tufts along the stem. In summer the showy, blue, dandelion-like flowers are open in the morning and close in the afternoon or in cloudy weather. Chicory was introduced from Europe and is now widespread along roads, in fields, and in sunny waste places in general.

Deptford Pink

Dianthus

The stiff forked appearance of these plants is rather uncommon, so they stand out in a mass of winter weeds. The stems may fork several times to give an ultimate height of nearly 3 feet. Clustered at the ends of the stems the dried remains of the flowers are erect and narrowly cylindric. The small bright rose-colored flowers with minute white dots bloom one at a time in the cluster in early summer. Deptford Pink grows in dry fields and waste places.



Culver's-root *Veronicastrum*

This plant may grow up to 6 feet tall. It has few to many stems arising from the base. The stems are unbranched except near the top where they give rise to whorls of erect flowering or fruiting spikes. The 2-celled capsules are ellipsoid, open by means of 4 short terminal slits, and contain many small seeds. The flowers produced in summer are small, white, blue, or purplish, and the narrow leaves are in whorls of 3-6. Culver's-root grows in moist or dry upland woods and prairies.

Arthur



Pepper-grass *Lepidium*

Pepper-grass is an example of the many species of mustard that may be found and recognized in the winter. It grows up to 2 feet tall and is simple to much branched with numerous flat, round fruits along the upper part of the branches. As in most members of the mustard family, when the two halves of the fruit fall away, a membranous partition remains attached to the flower stalk. This is a common weed of waste ground.

Russell



Parker

Purple Coneflower *Echinacea*

These stout plants with broad heads are as easily noticed in winter as are the pale reddish-purple flower-heads of summer. The heads may be up to about 1½ inches in diameter and almost as tall. They are covered with stiff pointed scales. Purple Coneflower is relatively rare in Michigan, where it is not native. It grows in open woodlands and prairies.



Thirtle

Rattlesnake-master *Eryngium*

These stiffly erect plants 3-4 feet tall are unbranched except at the flowering portion where they may have a few short branches. The heads are terminal on the branches, nearly globose, and up to about an inch in diameter. They persist well into the winter. This member of the carrot family is unusual in having its flowers borne in dense heads; another peculiarity is that its leaves are linear with parallel veins and spiny margins. The white flowers are produced in late summer. This species grows in dry or moist sandy soil, in open woods and on prairies, and is very rare in Michigan.



Platz

Cow-parsnip

Cow-parsnip, like Queen Anne's Lace which also belongs to the carrot family, has the flowers borne on little rays radiating from the ends of larger rays which in turn arise from a common point around the stem much as the ribs radiate from the top of an umbrella. This arrangement of flowers or fruits is called an umbel. This is a very coarse species; the plants may be as tall as 10 feet. The small white flowers bloom in early summer, and produce flat, non-prickly fruits. This species grows in moist soil.

Heracleum



Hicks



Harkaway

Queen Anne's Lace

The small white flowers of Queen Anne's Lace are borne in numerous many-rayed somewhat flat-topped umbels and are followed by small prickly fruits with rows of strong curved bristles. This species grows along roads, in open fields, etc., and is often a troublesome weed. The delicate-looking dried stalks are often used to advantage in arrangements. The dry umbels have the ability to change from having the rays incurved to opening out nearly flat according to changes in the weather.

Daucus

Coles





Hopkins

Sweet Cicely

Osmorhiza

The slender stiffly erect plants up to 3 feet tall have widely branched few-flowered umbels. The tiny white flowers bloom in late spring and produce long, narrowly club-shaped, slightly flattened, dark brown to blackish fruits. The fruits are covered with short appressed bristles and readily stick to an animal's fur or to clothing, thus aiding in dispersing the species. The fruits eventually separate into 2 parts. The thickened roots have an anise-like odor and the fresh foliage when it is crushed has an odor like licorice. This stick-tight grows in moist woods and thickets.

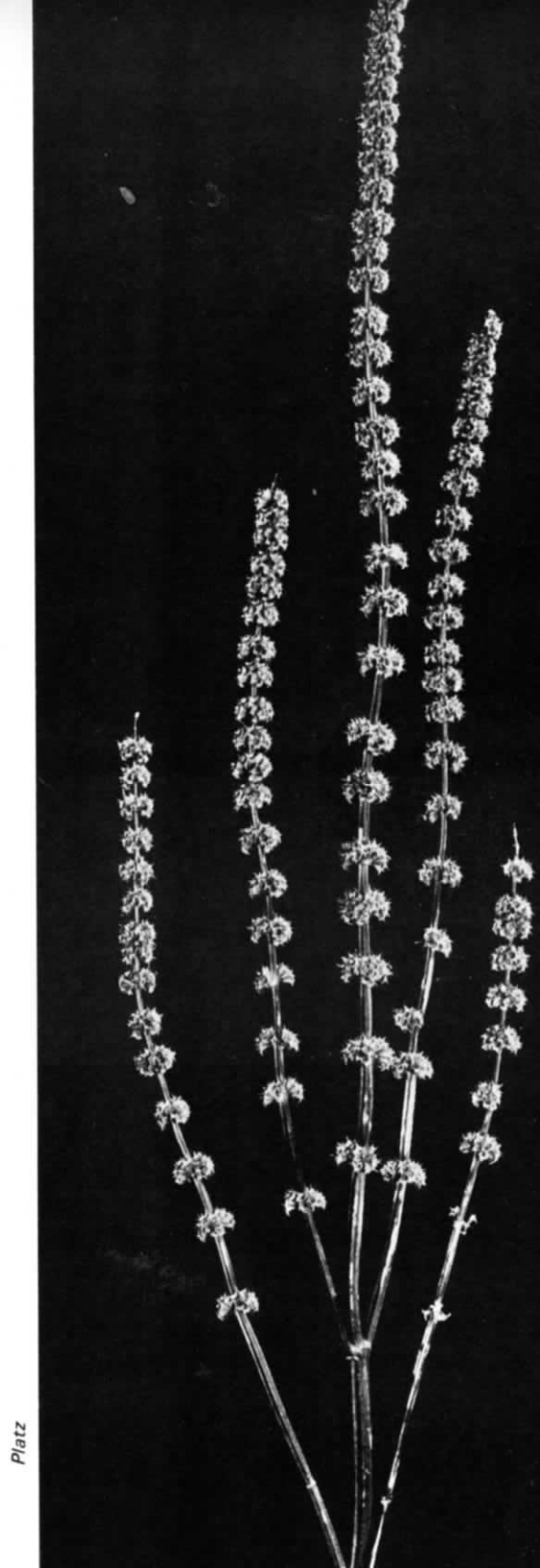
Motherwort

Leonurus

This coarse erect perennial may be up to 5 feet tall. The branches are opposite each other and are more numerous toward the top of the plant. As in all members of the mint family, the stem is square in cross-section. The small, pale pink inconspicuous flowers are clustered in the axils of the upper leaves. The 5-angled calyx, each lobe of which is drawn out into a short sharp point, is conspicuous in the winter. Motherwort blooms in the summer and grows in dry to moist waste places.



Dice



Platz

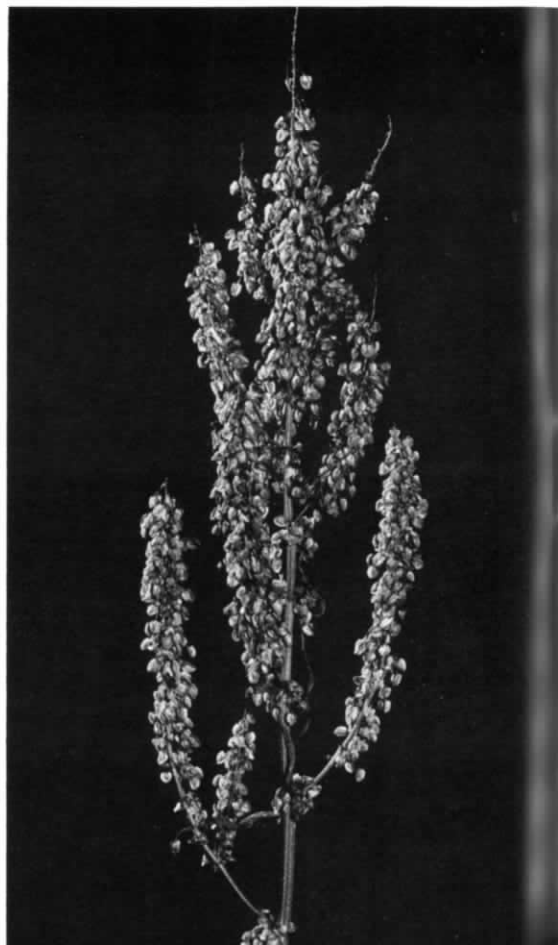


Dock

Rumex

The docks are easily recognized by the thick elongate clusters of fruits which persist well into the winter. The small reddish brown fruits themselves are 3-angled with 3 wing-like appendages. The flowers are small and inconspicuous and the leaves are mostly basal. The attractive fruiting stalks are used in winter bouquets. Care has to be taken in working with them as they shatter readily. Most species of dock grow in dry or waste land but some grow in wet places.

Platz



Platz

Bush-clover

Lespedeza

Plants of Bush-clover may reach a height of 5 feet but are usually much smaller. In the winter condition they are stiffly erect and unbranched or have only a few short branches in the upper portion. The dense fruiting heads are erect on the ends of short stalks and are globose to broadly ovoid. The tiny pea-like flowers are rather unattractive. Bush-clover is often a conspicuous plant in sunny fields and open woods or on sand dunes.

Heal-all

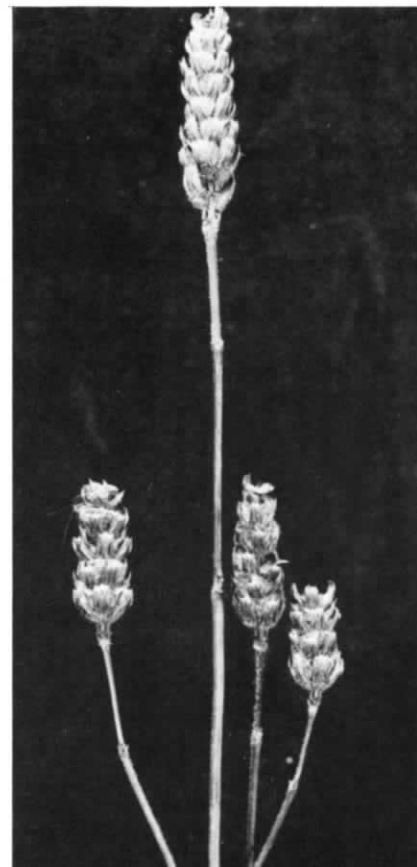
Prunella

This low-growing erect or somewhat decumbent mint has at least the tips of the square stems erect. The fruiting portion is more or less cylindrical at the end of an upright branch. Its most conspicuous structures are the rows of hairy overlapping bracts. In summer the purplish blue flowers are borne in clusters of three in the axils of the bracts. Heal-all is a common weed of fields, woods and waste places. Many mints can be easily recognized in winter, not only by their square stems, but also the dense flower clusters with each calyx sharply 5- (or 4-) toothed, as shown in Bergamot at the right.



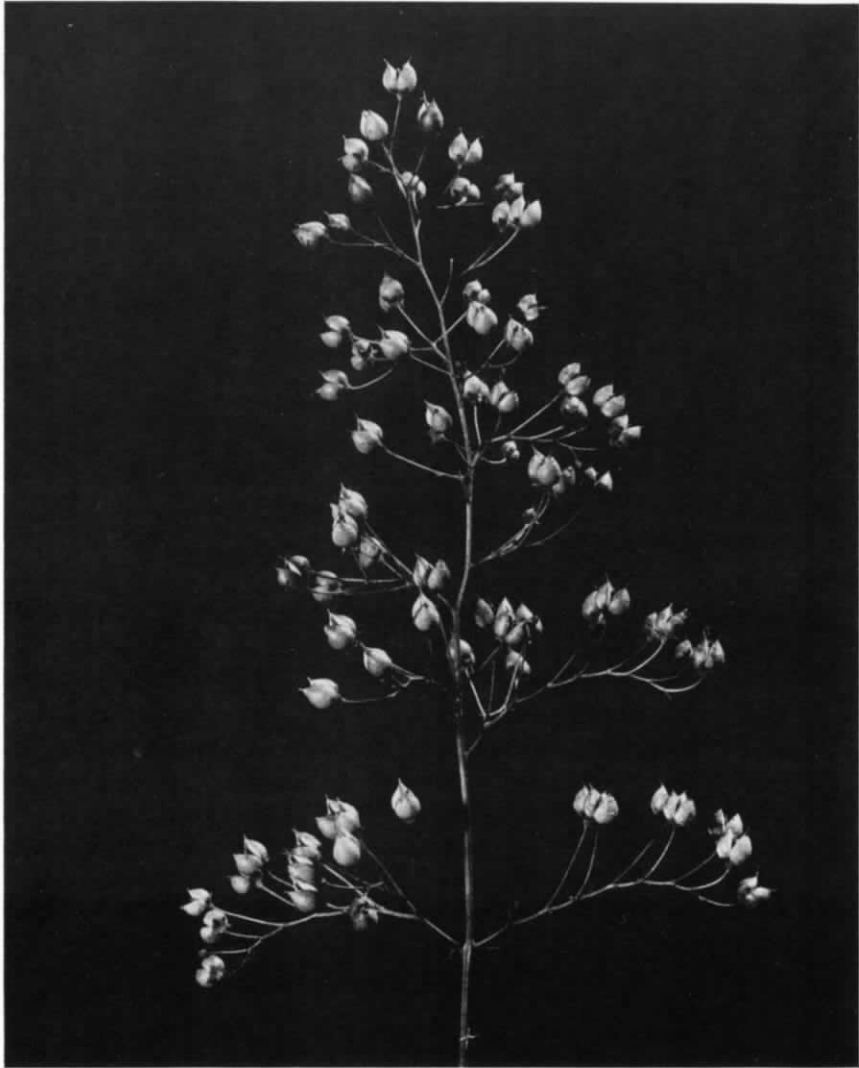
Farrar

Smith



Parker





Platz

Figwort

Scrophularia

Figwort often grows as a large plant up to 9 feet tall with numerous loose branches bearing flower clusters in the upper part. The flowers themselves are small, brownish, and scarcely more conspicuous than the capsules which follow them. The ovoid capsule consists of 2 cells which open at the end, permitting the seeds to escape. This member of the snapdragon family has a stem square in cross section, just as it is in the mint family. This species grows in open woods, thickets, and fields, where it usually overtops other plants.



Platz

Michigan Lily

Lilium

This handsome plant may be only 1.5 feet tall or tower to a height of 7-8 feet. Near the top it produces 1-8 flowering stalks. The flowers nod but the stalk straightens up and the fruits are erect. The 3-celled capsules open from the apex and the scars of the petals are visible at the base. The large orange to orange-red flowers spotted with purple are among our showiest summer wildflowers. Michigan Lily grows in wet sunny or partially shaded places.

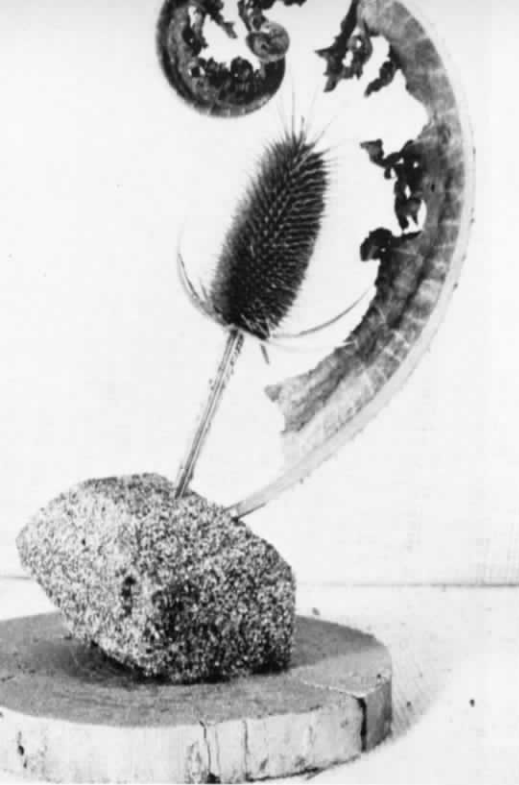


Platz

Wild Iris

Iris

The unbranched stiffly erect stalks of Wild Iris, also known as Blue Flag, may be 3 feet tall. The 1-4 large, brown, erect capsules open from the top into the 3 cells, and have no petal scars at the base. The seeds are flat and somewhat papery in texture and are shaken out of the capsules by air movements. The large, showy blue flowers bloom in early summer. Wild Iris with its familiar sword-like leaves grows along lake shores, in wet meadows, and other wet places.



Arrangement by Gary Anderson

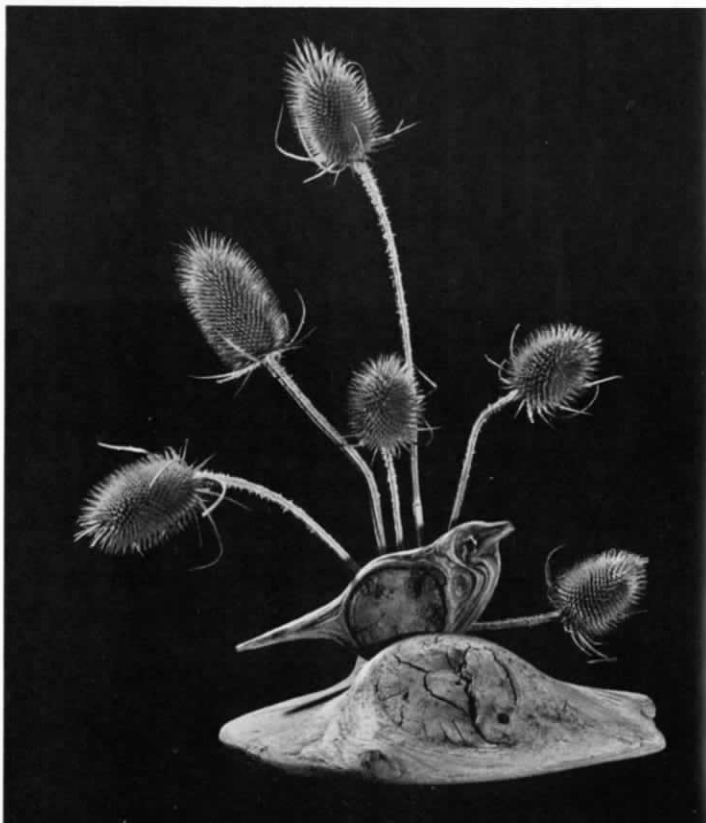
Lewis

Arrangement by Mary Wilson

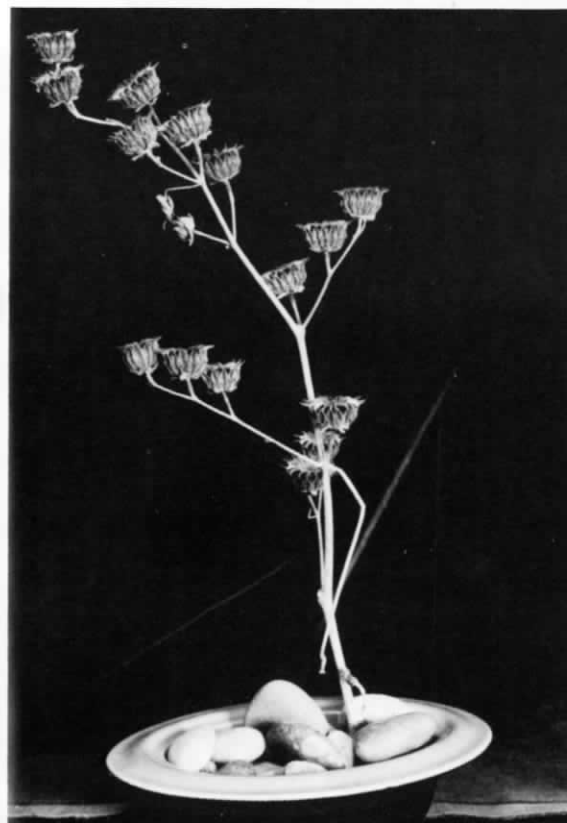


Bennett

Arrangement
by Mary Wilson



Platz



Arrangement by Helen Smith

Smith



Dorn



Freimarck



Parker

Mullein

Whether seen as a single, short, thick unbranched stalk or a 6-foot tall stout plant with a branching candelabrum-like top, Mullein is unmistakable in the winter landscape. These long dense spikes produce crowded, 2-celled capsules. This is a biennial which forms a rosette of thick velvety leaves on the ground one year and sends up stalks of yellow flowers the second year. The rosette may be found in surprisingly good condition throughout most of the winter. Mullein grows in fields and pastures, on stony hillsides, and frequently along the expressway right-of-way. It usually grows as colonies of plants of many different sizes and can be easily recognized at expressway speeds.

Verbascum

Pigweed

Growing 6 inches to 6 feet tall, this common weed of cultivated ground bears long branching spikes of inconspicuous greenish flowers which produce shiny black seeds. Sometimes there are short spikes of flowers and fruits in the axils of leaves and branches. Some species of pigweed are low and prostrate. All species have tiny seeds so numerous that they can be threshed out and ground into a meal which imparts a buckwheat-like flavor to pancakes, muffins, etc. Pigweeds grow in old fields, along roads, and in waste places in general.

Amaranthus



Purple Loosestrife

These tall plants, up to 6 feet or more, produce slender terminal spikes of flowers or fruits. The purple-red flowers are clustered in the upper axils, and the small capsules are often quite crowded. This European immigrant often makes striking displays of color in summer when it is in full bloom and is especially showy around ponds and along streams. This is vigorous enough to crowd out native species and becomes a nuisance in wet areas at times.

Lythrum



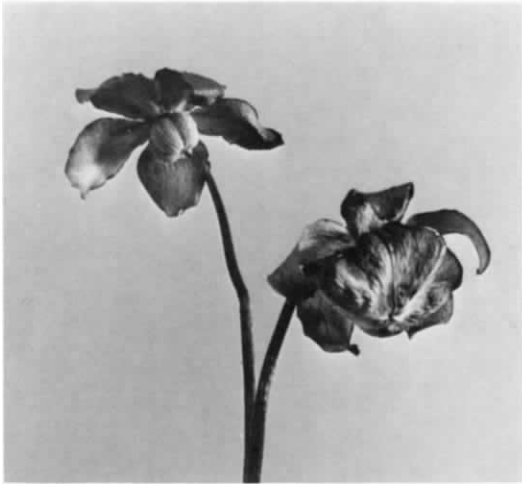
Farrar

Platz

Pitcher Plant

The dried flowers of the Pitcher Plant look very much the same as the flowers when in full bloom except for color. The nearly globose seed capsule surrounded by five sepals is exposed on the left specimen but obscured by the other flower parts on the other specimen. The curious pitcher-shaped leaves may remain intact through the winter. This is a characteristic plant of sphagnum bogs and acid shores.

Sarracenia



Wilson



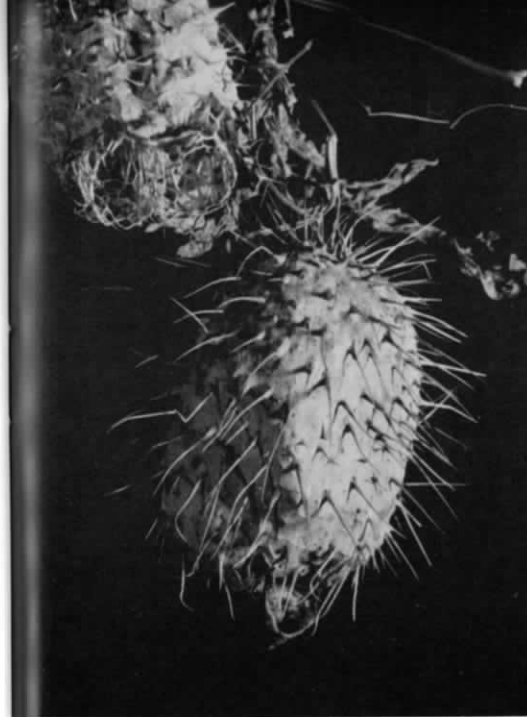


Platz

Ground-cherry

This low-growing, widely spreading species has soft stems that do not usually persist long. However, the papery, pointed-ovoid bladder which encloses the many-seeded, pulpy berry may be found intact in early winter. The cultivated Chinese Lantern Plant with its similar but bright orange bladders is also a member of this genus. Ground-cherries have cup-shaped flowers which normally arise from the forks of the stem. They usually grow in dry soil in open woods.

Physalis



Funk

Prickly Cucumber *Echinocystis*

This high-climbing annual vine festoons moderately tall shrubs, other plants, and fences in winter. It climbs by means of branched tendrils. The numerous small greenish white flowers produced in summer are of two kinds, one of which produces stamens and the other forms the prickly, inflated, 2-celled, ovoid fruits which become dry and papery in winter. The 4 large dark colored seeds escape by means of 2 pores at the end of the fruit. Although this species belongs to the same family as squash, cucumbers, and melons, its fruits are not edible.



Parker

Wild Yam

Dioscorea

This twining vine is not particularly noticeable in the mass of leaves in the summertime vegetation but in winter the clusters of hanging fruits are quite conspicuous in moist open woods, thickets, and swamps. The fruits are up to an inch long and have three conspicuous wings. The seeds themselves inside the capsules are flat and have a membranous wing. These vines twine extensively over other plants. Our native species of Wild Yam does not produce edible tubers.



Parker

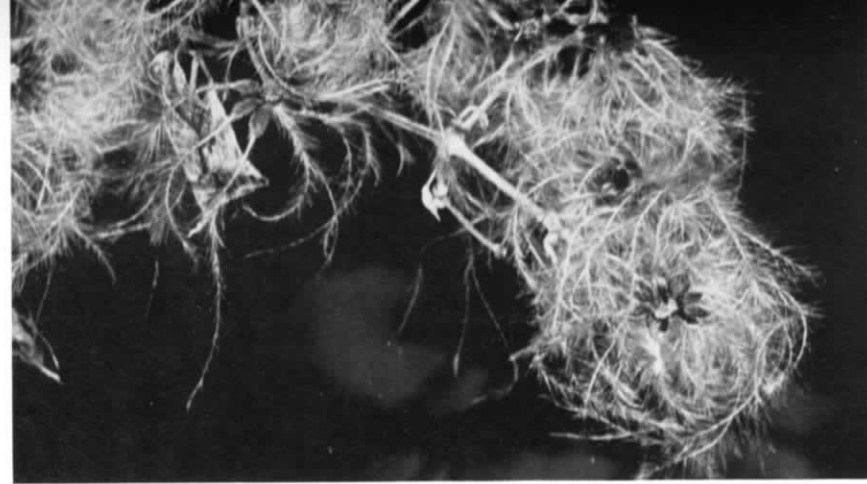
Mellichamp



Poison-ivy

Poison-ivy is a climbing woody vine which has white berries (in the northern part of its range it occurs in a shrubby form). It may present a bizarre effect when it grows over fenceposts or other supports. It is frequently found climbing the trunks of trees. This species, like Poison Sumac, contains a toxic material which causes mild to severe dermatitis in susceptible people, so it is wisest not to collect the berries.

Rhus



Mellichamp

Virgin's-bower

This vine commonly climbs over other plants, sometimes completely obscuring them. It is easily recognized well into winter by the fragile-looking fluffy masses of fruits. Each has a long feathery white tail up to 1½ inches long. Virgin's-bower grows in moist soil and produces masses of white flowers in summer.

Clematis

Bittersweet

Bittersweet is a vine with clusters of orange and scarlet fruits that are most colorful in winter. This vine climbs fences, shrubs, and small trees along roadsides and in thickets. Bittersweet is on the protected list in Michigan and must not be picked without proper authorization.

Celastrus

Mellichamp





Farrar

Spotted Star-thistle *Centaurea*

This bushy-branched, wiry-stemmed plant has the flower heads solitary on the numerous branchlets. The heads in fruiting condition are characterized by the dark comb-like tips of the overlapping bracts. The pinkish purple flowers bloom in summer. Unlike the true thistles the star-thistles are not prickly. Star-thistle grows in fields, along roadsides, and in waste places and is often so abundant as to be a troublesome weed. There are numerous other species in this genus, with flowers of various sizes and colors, including the well known "Bachelor's-button" of the garden.

Arthur



Parker



Parker

Parker

Prairie-dock *Silphium*

These tall plants (up to 7-8 feet) present a striking appearance. The large rough leaves at the base are on long stalks; they often become somewhat folded together and semicoiled, and remain well into the winter. The leafless flowering stalks are few to numerous. They fork in the upper part a number of times and each small branch bears a solitary terminal yellow head in late summer. Early in winter the dried heads may present a flower-like appearance. Later, practically all the flower parts disappear leaving only the barren stalks. Prairie-dock is a plant of dry open ground.



Thistle

Cirsium

The various species of thistle are readily recognized as such by their prickles and the characteristic fruiting heads. The fruiting heads have several rows of more or less spreading narrow, elongate bracts which are often spine-tipped and surround the central seed-bearing part. The seeds themselves (actually tiny fruits) are quite numerous, small and elongate, and have a tuft of feather-like silky hairs at the summit. Also in the head are intermixed dense bristles, the whole center producing a sort of powder-puff effect. Thistles grow along roadsides, in fields and waste places, usually out in the open. The Swamp Thistle (below) lacks spines in the upper parts and grows in wet places.



Parker



Coles



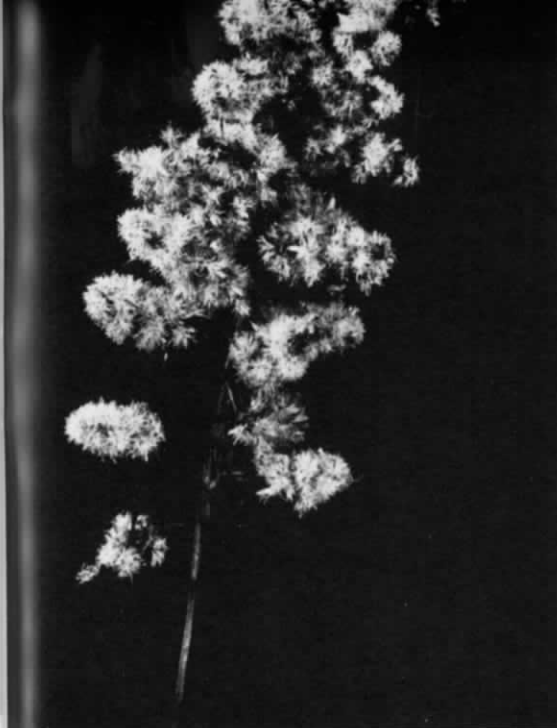
Campsmith/Kalamazoo Gazette



Parker



Arthur



Thirtle



Smith

Farrar

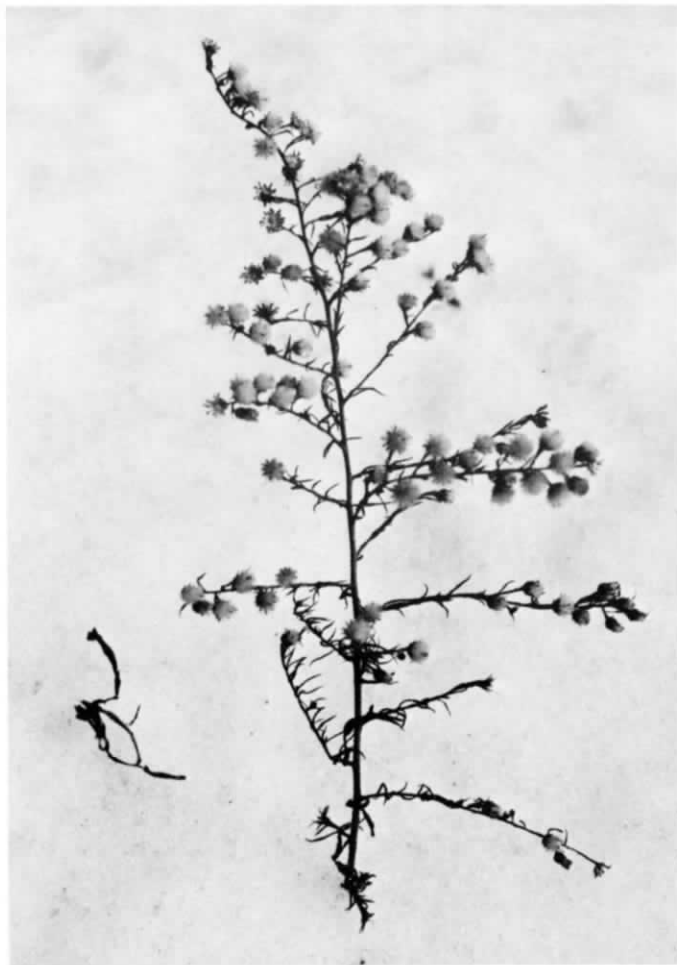
Parker



Goldenrod

Solidago

Goldenrods are as conspicuous in the winter as they are in the fall landscape. The flower cluster may be somewhat pyramidal or wand-like at the summit of the stem, or more or less flat-topped. Also conspicuous in winter are the ovoid or ellipsoid galls that may be found on the stems. These result from injury to the plant where an insect laid an egg in the stem. The worm in the gall is often used as bluegill bait by ice fishermen. Frequently above the gall there will be a peculiar branching. Goldenrods are plants of mostly sunny rather dry places and produce their small yellow flowers in the fall.



Parker

Wild Aster

The species of aster are hard to identify even in summer but it is often impossible to identify them in winter. It is easy enough, however, to recognize that they are asters. In most species, the dried heads are in clusters near the top of the plant; the dried bracts that are below the flowers in summer or fall appear like dried petals in winter. The fruits remain attached for a long time in some asters; they are small, elongate, and topped by a ring of fine bristles which produce in effect a parachute so that the seeds may be blown away by the wind. Asters flower principally in the fall and may have white, pink, or purple flowers. The various species grow in wet or dry habitats and in either sun or shade.

Aster



Dice



Smith



Bennett

Pearly Everlasting

Anaphalis

These small dense whitish heads borne in rather compact clusters at the ends of unbranched stems, look very much the same in winter as they do in summer. They are frequently used in winter bouquets and for this purpose they should be collected while still in bud and allowed to air-dry with the heads hanging down. The stems (up to 3 feet tall) and numerous leaves are covered with white woolly hairs. This species grows in dry sandy or gravelly soil, on road cuts, and sometimes in open woods.

Burdock

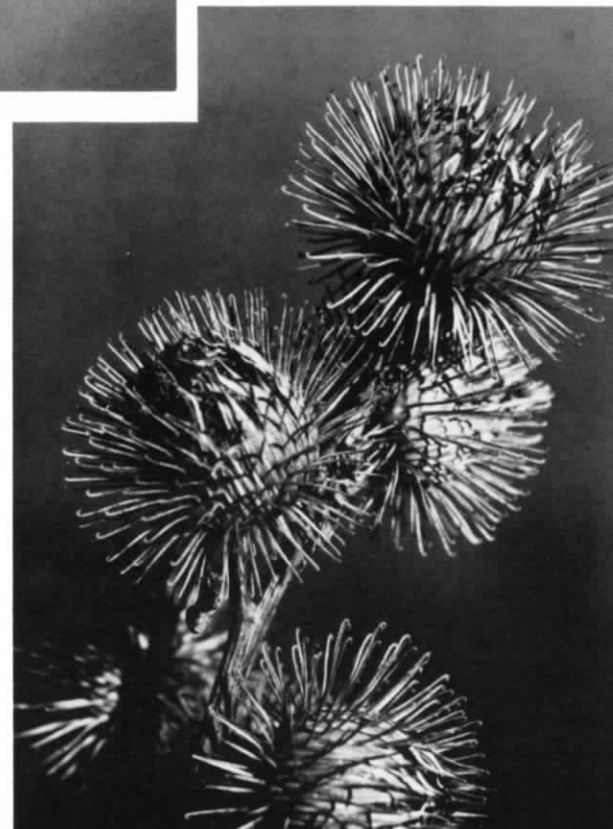
Arctium

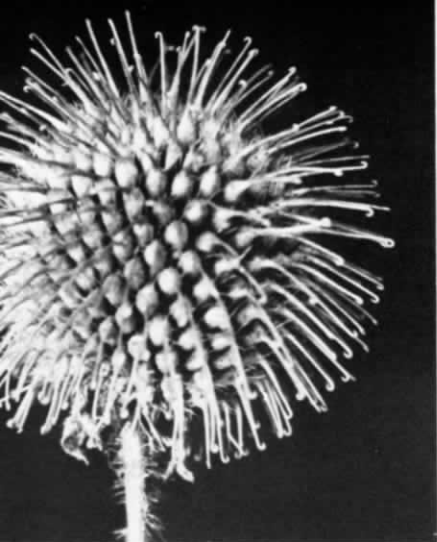
Burdock is a coarse weedy plant with a characteristic widely spreading branching pattern. Clusters of burs along the stem and at the ends of the branches make the plant easy to recognize. The stiff, hooked spines of these burs cling tenaciously to clothing or the fur of animals. The lavender to rose-purple flowers bloom in summer and fall. The plant may grow up to 6 feet tall and is found in waste land and open fields in moist soil.



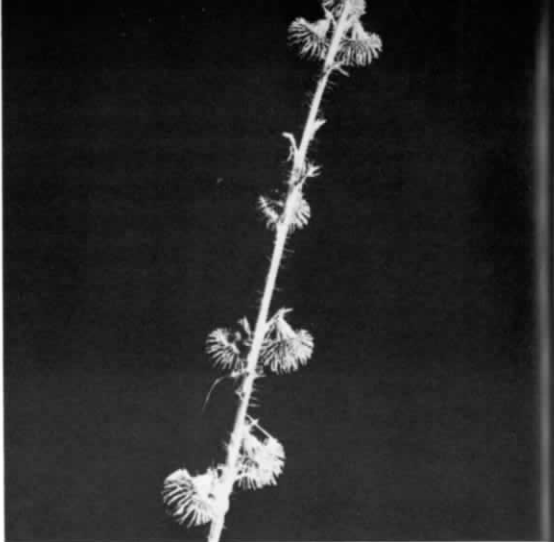
Coles

Thirtle





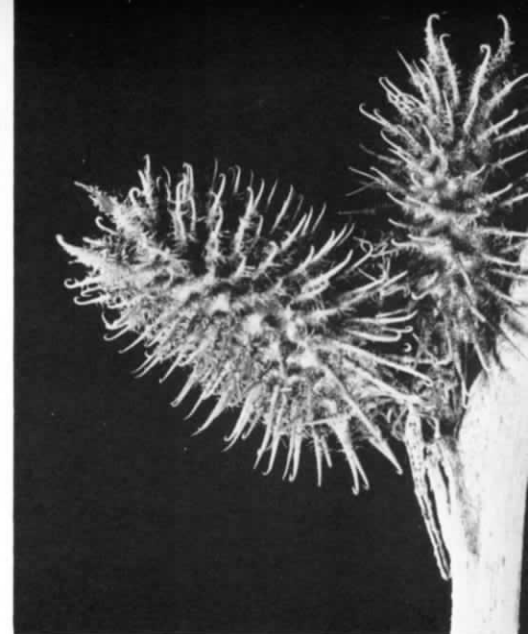
Farrar



Hopkins



Smith



Farrar

Avens

Geum

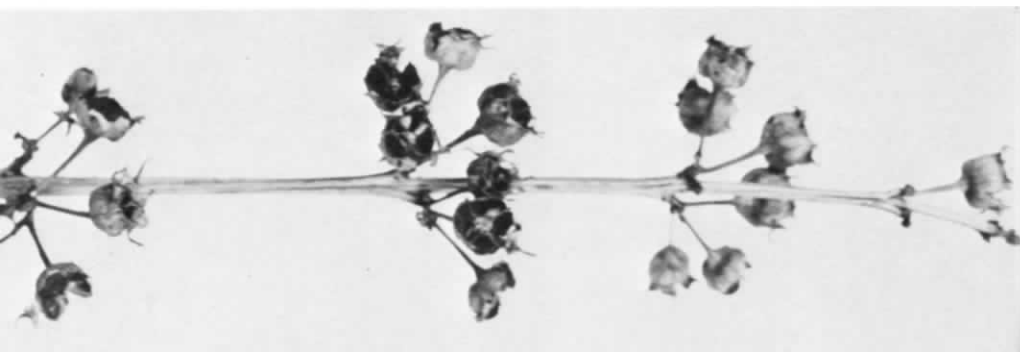
The various species of Avenae are perennial plants with white, yellow, or purplish flowers. Each flower produces a more or less globose or somewhat elongate head of small nutlets each of which bears a long, naked or hairy tail hooked at the tip. At flowering time there is another terminal section of the tail. The terminal section soon falls off. Avenae blooms in summer in various habitats according to the species; it may be in open woods, thickets, meadows, or wet places.

Agrimonia

Agrimonia

This is an unusual type of "stick-tight" in that the part which is covered with bristles is the enlarged, somewhat top-shaped receptacle. (The receptacle is the end of the stem on which the flower parts are attached.) This becomes enlarged as it matures and the bristles become stronger in a band around its edge. The small hard seeds are completely enclosed. The plants grow in woodlands and bear small yellow flowers in summer and early fall.

Smith



Cocklebur

This coarse weedy much-branched plant may grow to nearly 5 feet tall. The small flower heads are of two kinds and are rather inconspicuous but the plants are noticed in winter because each fertile head becomes a brown prickly cocklebur. These are cylindrical, an inch to an inch and a half long, covered with stiff curved spines, and have a pair of longer straight or incurved beaks at the apex. These burs stick to clothes or to animals' fur and are thus readily transported with the enclosed seeds. The seedlings and young leaves are highly poisonous to stock. The seeds themselves are poisonous but are safely protected by the spiny bur. Cockleburs grow in fields, flood plains, beaches, and waste places.

Xanthium

Water-willow

This aquatic plant has stems 3-9 feet long which are usually arched or recurved and often root at the tips. The magenta flowers are borne in opposite or whorled clusters along the upper part of the 4-6-sided stems and mature into globose capsules. These are nestled in the cuplike calyx with a toothed margin. Water-willow grows in swamps and shallow water and around lakes in dense stands; it has thick white corky tissue at the bases of stems in water.

Decodon



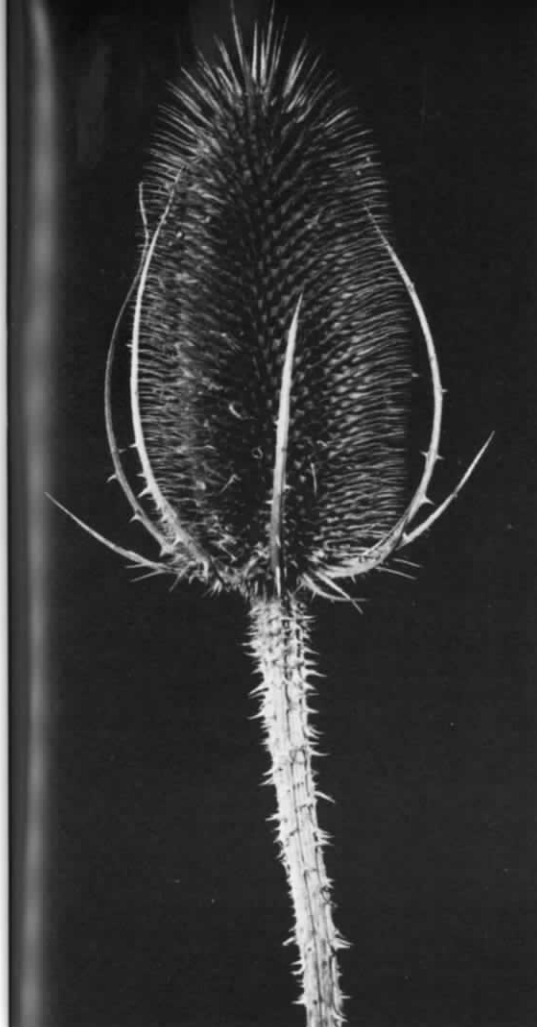


Platz

Jimson Weed

In the winter condition the stout stem, wide branching, and height of the plant (up to 5 feet) are distinctive as are the conspicuous spiny fruits. The spiny capsules split open to release numerous small dark seeds. The large white, funnel-shaped flowers are solitary and erect at the forks of the stem in summer. All parts of this plant are dangerously poisonous when eaten. Jimson Weed grows in waste places, fields, barnyards, and cultivated areas.

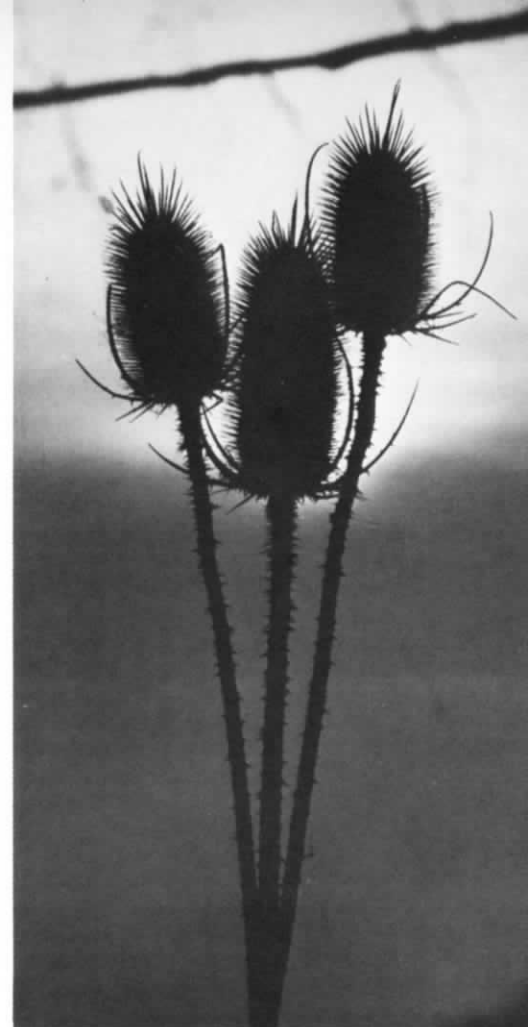
Datura



Hostman

Teasel

These stout, coarse, sparsely branched plants with ridged prickly stems and numerous large cylindrical brown terminal heads, are a conspicuous part of the winter landscape. The plant may grow 6 feet tall. The heads of dense somewhat flexible, pointed bristles bear at the base a series of narrow, upcurved prickly bracts. The leaves are also prickly. The heads and to a lesser extent the dried leaves are popular in winter arrangements. Teasel is naturalized from Europe where the heads of a closely related species were used for carding wool. Teasel grows along roads and in waste ground.



Coles

Dipsacus

Indian Pipe

Monotropa

Nothing else in the woods is likely to be confused with the Indian Pipe. It usually grows in dense clumps and the erect unbranched stems are up to 8 inches tall with a single nodding flower in summer. In fruit the stem straightens up and has the subglobose capsule erect. These leafless plants are ghostly white when fresh but turn gray to black in drying. They grow in leaf mold in woods.

Thirtle



Beech-drops

Epifagus

This interesting, leafless, non-green plant grows only under beech trees upon which it is parasitic. In winter, it is easily recognized by the slender branches with scattered small brown capsules. In summer it is yellowish brown and bears flowers of two kinds. The tubular upper flowers are whitish striped with madder and are somewhat two-lipped; the lower flowers are caplike and do not open.

Parker



Platz

Goat's-beard

Tragopogon

Growing in open sunny fields, along roadsides, etc., the goat's-beards are stiffly erect, sparsely branched with grasslike leaves, and bear a single flower head at the apex of each branch. The flowers are yellow or purple depending upon the species. The fruiting head is globose and resembles that of the common dandelion but is much larger. The nutlets are elongate, and each is provided with a stalked parachute or umbrella-like arrangement allowing it to be carried away by the wind. These fruiting heads are short-lived and do not last into the winter in nature, but may be seen from early summer to fall. They may be preserved for winter decoration by spraying them with a plastic spray or hair spray.

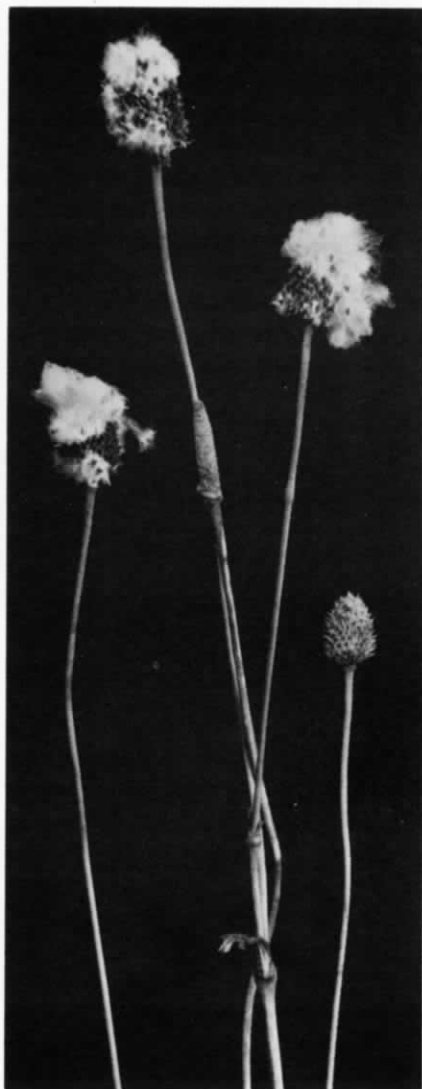
Thimbleweed

Anemone

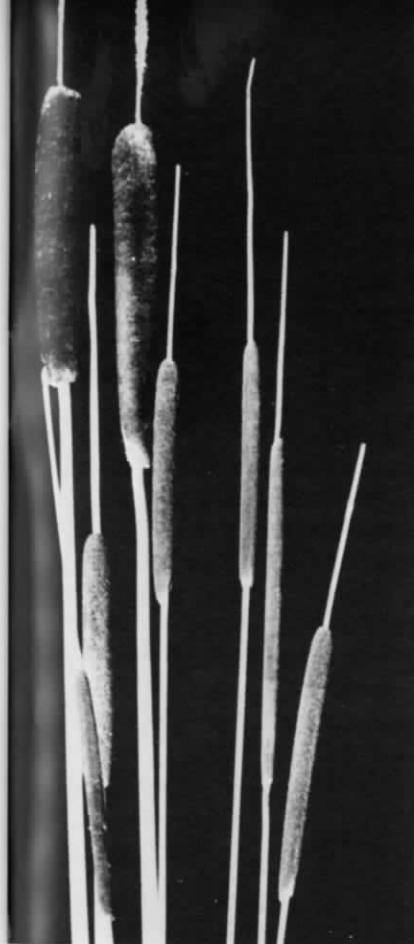
The several species of thimbleweed are easily recognized in winter with one to a few long, unbranched leafless flowering stalks. A single greenish white flower on each stalk matures into a cylindrical head—the "thimble." The head is composed of a large number of small hard nutlets each of which bears a cottony mass of fluffy hairs. This bit of cotton aids dispersal of the seeds by wind or on the coat of an animal.



Freimarck



Smith



Bennett



Russell

Cat-tail

Typha

Everyone knows the cat-tails with their brown sausage-like heads at the ends of the unbranched stems. The innumerable minute nutlets bear copious white down, which enables them to become windborne. The heads are often used for winter decoration. For this purpose they should be picked at an early stage or they will disintegrate too quickly. The narrow-leaved and broad-leaved species likewise differ in the thickness of their heads. Cat-tails grow in large colonies in wet places, usually in the sun. They provide shelter to large numbers of wildlife and are always associated in my mind with red-winged blackbirds which so frequently nest in clumps of cat-tails. The rootstocks are also a valuable source of food for wildlife and provide palatable food for man.



Coles

INDEX

- Abutilon, 30
 Achillea, 17
 Agrimonia, 54
 Agrimony, 54
 Alisma, 17
 Allium, 18
 Amaranthus, 37
 Anaphalis, 52
 Anemone, 60
 Apocynum, 8
 Arctium, 52
 Asclepias, 6
 Aster, 50
 Aureolaria, 9
 Avena, 54
 Baptisia, 9
 Beech-drops, 58
 Bergamot, 27
 Bittersweet, 43
 Blue Flag, 29
 Blue Vervain, 34
 Bulrush, 13
 Burdock, 52
 Bush-clover, 26
 Carex, 13
 Cat-tail, 61
 Celastrus, 43
 Centaurea, 44
 Chicory, 19
 Cichorium, 19
 Cirsium, 46
 Clematis, 43
 Cocklebur, 55
 Cow-parsnip, 22
 Culver's-root, 20
 Cypripedium, 35
 Datura, 56
 Daucus, 23
 Decodon, 55
 Deptford Pink, 19
 Dianthus, 19
 Dioscorea, 41
 Dipsacus, 57
 Dock, 26
 Dogbane, 8
 Echinacea, 21
 Echinocystis, 41
 Elymus, 11
 Epifagus, 58
 Eryngium, 21
 Evening-primrose, 35
 False Foxglove, 9
 False Indigo, 9
 Ferns, 14-15
 Figwort, 28
 Gentian, 18
 Gentiana, 18
 Geum, 54
 Glyceria, 10
 Goat's-beard, 59
 Goldenrod, 49
 Grass, 10-11
 Ground-cherry, 40
 Heal-all, 27
 Heracleum, 22
 Indian Pipe, 58
 Iris, 29
 Jimson Weed, 56
 Lady's-slipper, 35
 Leonurus, 24
 Lepidium, 20
 Lespedeza, 26
 Lilium, 29
 Lychnis, 31
 Lythrum, 38
 Manna Grass, 10
 Matteuccia, 14
 Michigan Lily, 29
 Milkweed, 6
 Monotropa, 58
 Motherwort, 24
 Mullein, 37
 Oenothera, 35
 Onoclea, 15
 Osmorhiza, 24
 Ostrich Fern, 14
 Pearly Everlasting, 52
 Pepper-grass, 20
 Phragmites, 11
 Physalis, 40
 Pigweed, 37
 Pitcher Plant, 38
 Poison-ivy, 42
 Prairie-dock, 45
 Prickly Cucumber, 41
 Prunella, 27
 Purple Coneflower, 21
 Purple Loosestrife, 38
 Queen Anne's Lace, 23
 Rattlesnake-master, 21
 Reed, 11
 Rhus, 42
 Rumex, 26
 Sarracenia, 38
 Scirpus, 13
 Scrophularia, 28
 Sedge, 13
 Sensitive Fern, 15
 Silphium, 45
 Solidago, 49
 Spotted Star-thistle, 44
 Swamp Thistle, 46
 Sweet Cicely, 24
 Teasel, 57
 Thimbleweed, 60
 Thistle, 46
 Tragopogon, 59
 Typha, 61
 Velvet-leaf, 30
 Verbascum, 37
 Verbena, 34
 Veronicastrum, 20
 Virgin's-bower, 43
 Water-plantain, 17
 Water-willow, 55
 White Campion, 31
 Wild Aster, 50
 Wild Garlic, 18
 Wild Iris, 29
 Wild Onion, 18
 Wild Rye, 11
 Wild Yam, 41
 Woolgrass, 13
 Xanthium, 55
 Yarrow, 17

