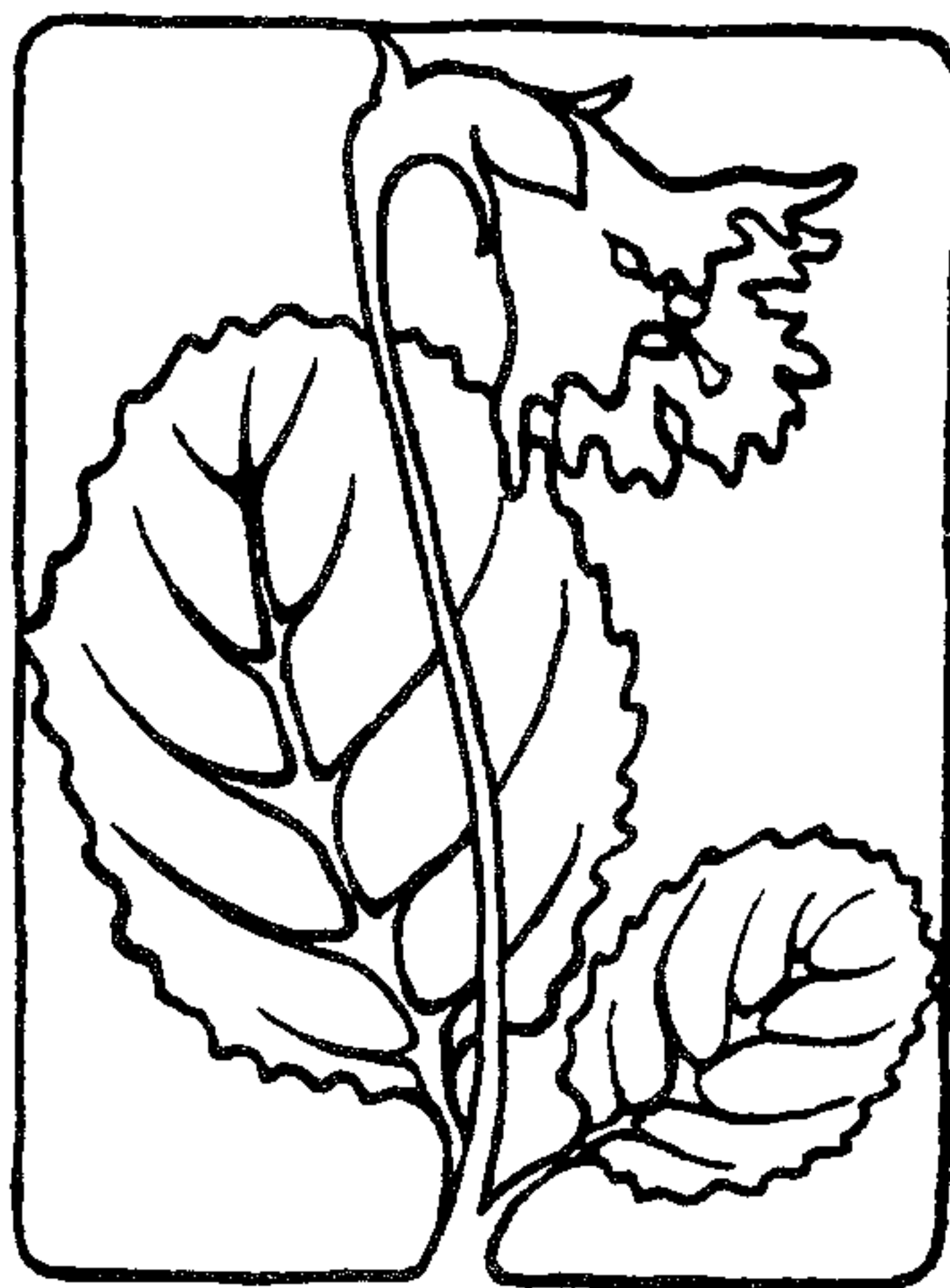


SHORTIA

NEWSLETTER OF THE
WESTERN CAROLINA BOTANICAL CLUB

SPRING 1992



BUD PEARSON, Editor

FROM THE PRESIDENT.....Bessie Sinish

A new year is before us! Many exciting programs and field trips have been planned for your experience into the world of beauty and the mysteries of nature.

As I am writing, I, also, am thinking of the weather of this winter. Warm for the most part. Dandelions and violets have been seen in every month. Green plants have been more noticeable. Now in the first days of February, pussy willows are breaking out from their cases and the buds of the maples are showing pink against the blue sky. Are we to be thrown off by these early signs? No!

In the words of George Dana Boardman, "The ignorant.... marvels at the exceptional; the wise.... marvels at the common; the greatest wonder of all is the regularity of nature." At one time or another, each one is ignorant, each one is wise, and at all times, if each one is full of wonderment, how rich each of us will become.

* * *

Many accolades go to John Saby, our treasurer of the past three years. He has served us well. John, enjoy your well earned vacation. Your loyalty is not taken for granted. Thank you for your time and effort spent in the interest of the club.

* * *

DO YOU HAVE A NAME? To help us all, both new and old members, PLEASE wear your name tag. These may be purchased at Bud's Barber Shop, 1420 Asheville Highway, across the street from Opportunity House. Bud (No relation to Editor) will make one for you at his SIGN SHOP, right next door.

* * *

WE WELCOME TO OUR CLUB:

Ed and Barbara Butenof, 201 Red Oak Drive, Hendersonville, NC
Malcom M. and Frances McGawn, Givens Estate, Wesley Drive, Asheville, NC
Julia Miles, Givens Estate, Wesley Drive, Asheville, NC
Ed and Mary Collins, Finley Cove Road, Hendersonville, NC
Evelyn Bellows, 2 Cedar Drive, Hendersonville, NC

* * *

RESIGNATIONS:

We regret the resignations of Sanford and Elizabeth Atwood, and Elizabeth Greiner. They have been contributing members in many different ways.

* * *

ANTICIPATING SPRING.....the Editor

While this is labeled the Spring issue of Shortia, it is published at a time that should be mid-winter. This year, while there have been many cold mornings, most mid-day temperatures have been as pleasant as early spring. The creeping phlox, some daffodils, and forsythia haven't seemed to recognize that winter is still upon us. And violets seem to pop up year round. Indeed the cultivated creeping phlox (thrift) may be undergoing a genetic change that provides for year round flowering.

Spring is the beginning of the most rewarding times for the botany club members. Each succeeding field trip is a competition with prior trips to identify a greater number of species. Spring has been acknowledged as the beginning of new life by poets and philosophers. It's a time of new life

Cont'd

Anticipating Spring (Cont'd).....

for the botany club, too. Time to leave the indoor programs and take to the woods. For a time WCBC becomes the "wildflower club".

Generally spring is considered to start with the vernal equinox, about March 21st, but plants and the weather do not necessarily follow this timetable, and we all recognize that spring comes earlier in the lower elevations. For the planners who schedule field trips, about the earliest flowers can be expected is mid March, but within a matter of days, early flowers can be found in profusion at lower elevations. In the lower elevations of Pisgah Forest we find *Epigea repens*, (trailing arbutus), on banks with a southern exposure, one of the earliest plants to bloom. A few *Houstonia serpyllifolia*, (blueets), *Potentilla canadensis*, (dwarf cinquefoil) and *Viola hastata*, (halbard-leaf violet) might be found.

At lower elevations, such as Pearson's Woods and Pearson's Falls, late March may be the time to view a variety of early wildflowers. Among them might be a species, *Sanguinaria canadensis*, (bloodroot), or; *Mertensia virginica*, (bluebells), *Hepatica acutiloba*, (sharp-leaved hepatica), *Erythronium americanum*, (trout lily), *Cardamine concatenata*, (toothwort), and *Claytonia virginica*, (spring beauty). Also, *Trillium cuneatum*, (Little sweet Betsy), among the earliest trillium, may be found.

It is time to dust off your Wildflower Guide, find your magnifying glass and join fellow members in the fields and woods. For some of us it is a repeat process of relearning species names forgotten over the winter. Checking the glossary in your Wildflower Guide is a good refresher of memory that helps with identification. In fact leafing through the book is a great way to prepare for plant identification. The more you know when you take the field, the more rewarding the experience. Spring is full of wonder!

* * *

PHOTOPERIODISM.....the Editor

How do the Spring flowers know when to bloom? The season changes, of course. That is true, but, why don't all the flowering plants bloom when the season changes? Or, another question, with warm winter days and sometimes cold spring weather, how does the plant know which season is at hand? The answer is that it measures the day length, the day length being the period that the sun is above the horizons. Every species is regulated by a specific day length, so different species bloom as the day length changes. This regulation by day length is known as Photoperiodism.

This presents another question. Since there are days of equal length in the spring and fall, how does the plant know whether it is a spring flower or a fall "bloomer"? The plant distinguishes by the sequence of events. In spring the sequence is of lengthening days after a period of dormancy. In the fall the days grow shorter after a period of growth.

The regulatory mechanism within the plant is controlled by a protein called Phytochrome, a pigment found mostly in the leaves. The phytochrome has two forms that absorb red light and far-red light and enable the plant to "measure" the night length and thus the day length. On the basis of these measurements, it will send hormonal signals that will trigger genetically programmed responses,....such as producing flowers. Experiments demonstrate that artificial light will interrupt the night length with the result that genetic responses may be untimely. Maybe the porch light causes those dandelions to bloom during a warm January?

RECORDERS REPORT.....ELTON J. HANSENS

In December Aline and I saw a dandelion in full bloom but a couple of days later it had faded. I thought no more about the incident until about a week later I passed the same location and lo, a miracle. The dandelion stem had grown straight and taller than before, and was crowned by fully developed seeds waiting for the wind to blow them away. How soon do you suppose they will grow and bloom and how far away?

This is what recording for the WCBC is all about--seeing the usual and unusual, calling attention to interesting items on field trips and recording them for future use by our club.

How did 1991 reveal the truths of botany to us? Each one found his or her own excitement, learned a few things and enjoyed our common experiences and friendships. The 1991 WCBC program was outstanding.

The great deal of work required in 1991 to maintain and improve our "Recorder" system required a committee which consisted of Elton Hansens, Chr., Erica Parmi, Bud and Laverne Pearson, Anne Ulinski and Bill Verduin. We thank the Committee and other members who helped them from time to time. In 1991 nearly 100 pages of reports and lists were added to our files. For many field trips in 1991 we provided a list of flowers likely to be found to each hiker. These lists were taken from previous records of hikes in the same month or from lists prepared by the trip leader or recorder on a scouting trip beforehand. These lists were well received and helped enable all hikers to recognize the flowers and associate scientific and common names with them. This also seemed to increase curiosity concerning plant communities and environments. The lists are neither difficult to prepare nor costly. Should we continue to prepare and distribute these lists on most field trips? Please inform the officers or recorders of your desires.

The 1991 Schedule listed 59 events. Lists of plants in bloom were prepared for 28 field trips. These data have been studied through the year. We can show the great diversity of flowering plants in our area by citing a few statistics. The lists of flowering plants prepared on field trips from March through October 25 were alphabetized into a single list. This list contained 450 species names which belong to 77 families and 240 genera. Of course, the largest family was the Asteraceae (composites) with species in 29 genera followed by Liliaceae (lilies) in 18 genera and Rosaceae (roses, etc.) and Lamiaceae (mints) each with 13 genera. Forty families were represented by only a single genus. One should remember that we only recorded plants actually in flower. Also, we see and recognize many trees and other plants which often have small flowers which we do not notice. Generally we ignore the grasses, sedges, and rushes with their tiny flowers which are difficult to identify. Even so the 450 species make an impressive and diverse list.

Why do we see so many kinds of flowers? That is easy---because we visit many kinds of habitats over an observation period of many months. We no doubt see many other flowers which we cannot name and we don't make the effort to find out. So what! We have a great time!

LOOK AGAIN !

Among our early spring-flowering plants there are a number of paired species that offer good opportunities for dusting off the field guides and sharpening our powers of observation.

Take the Spring Beauties, for example. The only obvious difference between our two species lies in the leaves, and although there seem to be endless variations in their shapes they usually can be separated if one keeps in mind that in Claytonia virginica they are narrow ($3/8$ " would be exceptionally wide) and essentially uniform in width along most of their length, tapering gradually toward the base with no evident distinction between leaf-stalk (petiole) and blade. In C. caroliniana, the blades are wider at some point (which may be below, above, or at the middle) but in any case they are clearly differentiated from the petioles.



The foliage of Hepatica consists of 3-lobed basal leaves, and in H. acutiloba these lobes are pointed, while in H. americana they are rounded. (The sepal-like bracts beneath the flowers also are pointed and blunt, respectively). The flowers, which are composed of petaloid sepals, generally are white in the first species but more likely to be blue, violet or pink in the second.



Pachysandra terminalis is familiar to many as an ornamental ground-cover which often persists after cultivation. We should be aware, however, that there is a related native species in southern woodlands. It is P. procumbens, known as Allegheny Spurge, and differs in that its spikes of little white flowers grow laterally from the lower, not upper, stem. Also, the foliage is mottled with light green early in the year.

Dick Smith

LET'S LOOK AT TRILLIUMS

Trilliums are among our showiest spring wild flowers. With their parts so plainly in 3's, it is difficult to mistake a trillium for any other flower. Trilliums are members of the Lily family. Unlike other members which have parallel-veined leaves, trilliums have net-veined leaves.

Trilliums fall into two groups: Flowers on a stalk; and flowers which are sessile (no stalk). Trilliums which may be found growing in western North Carolina, along with some characteristic features which may be helpful in their identification are these:

1. Flowers on a STALK. Leaves NOT MOTTLED.

Flowers usually on an UPRIGHT stalk.

Trillium erectum var. *erectum* - Wake robin; Stinking willie

Flowers maroon or white; pink, yellow, green colors are infrequent.

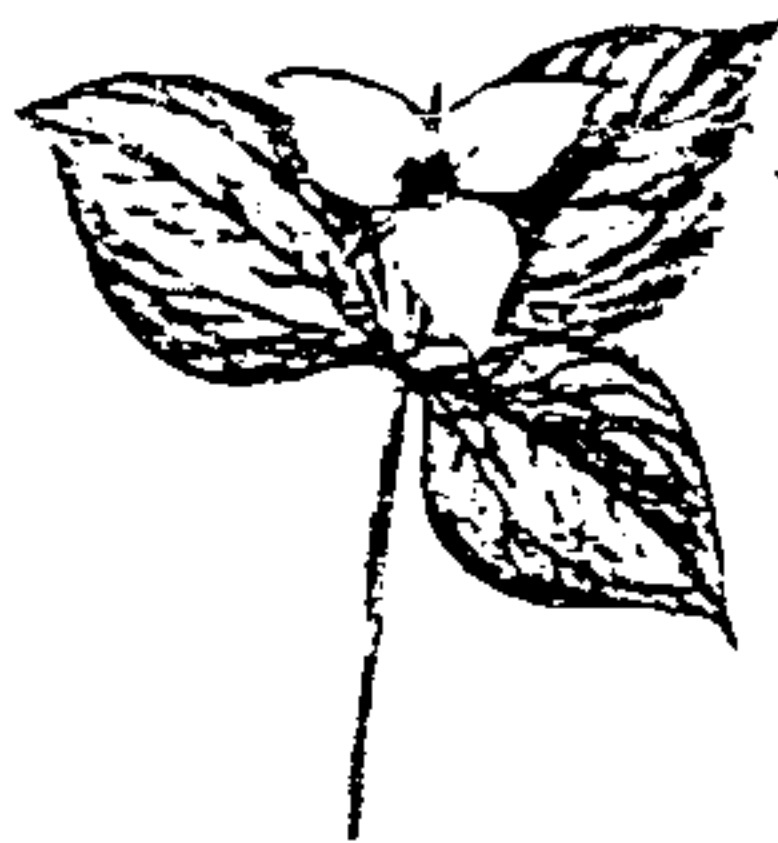
Stamens same color as petals. Anthers whitish. Flowers ill-scented. Radford shows as growing in 22 counties to high elevations.



T. grandiflorum - Great white trillium

Wavy-edged white petals form a tube like an old-fashioned Victrola horn. Anthers yellow. Flowers turn pink with age.

Western part, to high elevations.



T. undulatum - Painted trillium

White petals with red, or magenta, inverted "v" at the base, near the throat. Grows in acid soil, typically above 3,000 feet, with rhododendron and hemlock.



Flowers usually on a NODDING stalk. Leaves not mottled.

T. catesbaei - Catesby's trillium (INFREQUENT)

Petals white to deep pink. Pink-edged sepals are sickle-shaped. Does not grow at high elevations.



T. cernuum - (also *T. rugelii*) - Nodding trillium (RARE)

Flowers usually white. Anthers lavender to purple. Filaments white. In *T. rugelii*, the throat is deep red. Radford shows as growing in Henderson, Polk, Mitchell, Mecklenberg, Yatin, and Guildford counties.



Flowers usually on a NODDING stalk. Leaves not mottled. (continued)

T. erectum var. vaseyi (T. vaseyi) - Vasey's trillium
Deep red overlapping petals. Flowers sweet-scented,
hang beneath large leaves. 13 counties.
Not at high elevations.



2. Flowers SESSILE. Leaves usually MOTTLED.

T. cuneatum var. cuneatum - Little sweet Betsy
Flowers scented. Flowers maroon, or varying
shades, to brownish maroon. Stamens colored like
petals. Frequent in s.w. mountains.



T. cuneatum var. luteum (T. luteum) - Yellow trillium
Petals, stamens, and ovary usually lemon-yellow.
Lemon fragrance.
Radford shows as growing in Graham, Madison,
Swain counties.



T. discolor - Pale yellow trillium
Petals spade-shaped, cream to pale yellow.
Stamens purple. Not tall growing. Radford
shows as growing in Jacson County, NC; Oconee,
Abbeville, Aiken, Mc Cormick, SC.



Illustrations adapted from Recognizing Flowering Wild Plants - Grimm

Millie Blaha



S H O R T I A

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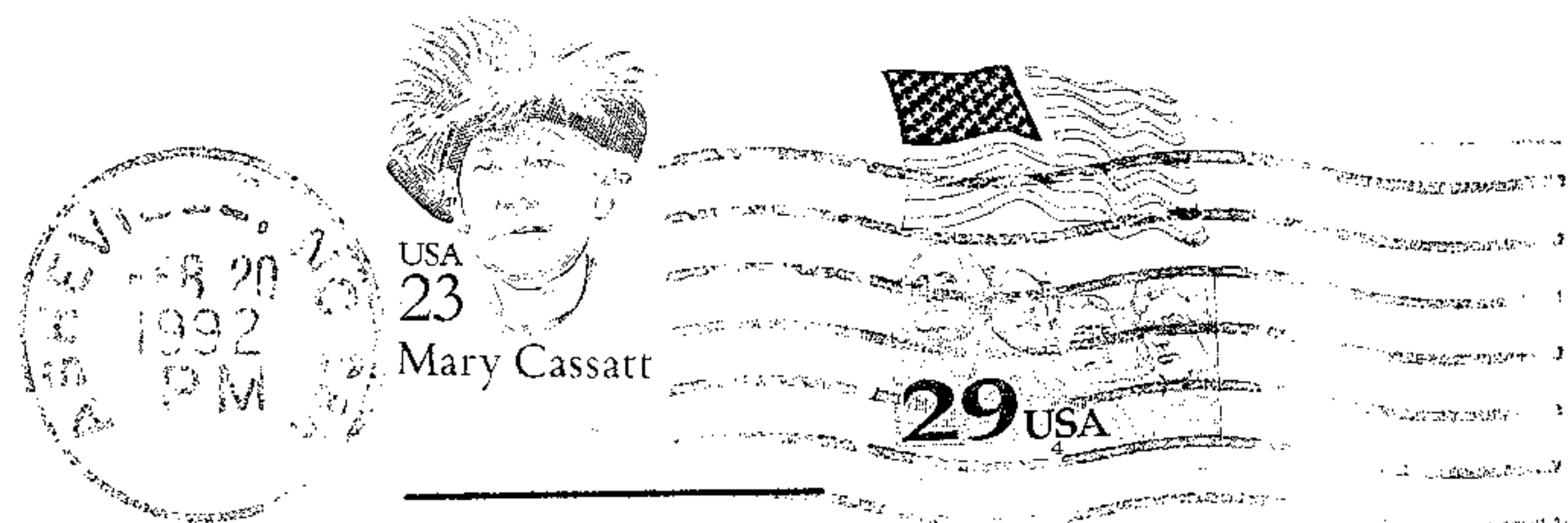
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