

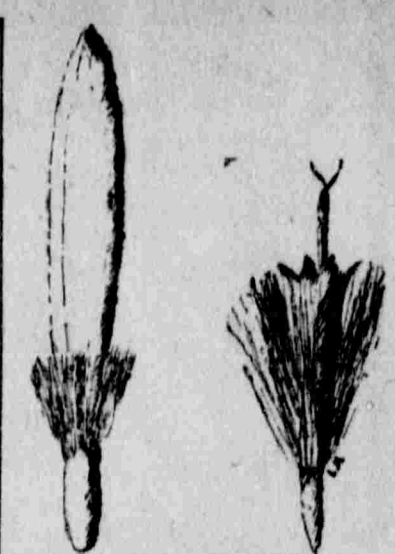
ASTERS: A STUDY IN VIOLET-PURPLE

Loveliness and Utility of One
Of the Common
Weeds.

A REAL WESTERN BEAUTY.

"Golden Rule for Flowers" Teaches
The Co-operation of Kingdoms
Of Nature.

One of our most refined ballads begins:
"In the sweet calm of this September
day
I pass along the paths we two have
trod;
And still upon the dear familiar way
Blends the blue aster and the golden-
rod."
NOW BLOOMING EVERYWHERE.
Our own asters and goldenrods, how-



A RAY AND A DISC FLOWER,
Of the Aster, Enlarged Six Times, from
Pen Drawing by Pupils.

The time necessary for this operation
varies from a few hours to a few days
in most species, while in others it may
require months.

THE GOLDEN RULE.

Now, in the aster and in the other
compositae, the pistil projects above
the stamens, so that the pollen dust
cannot reach it, and the help of the
insect tribes is necessary. Not only do
none of us "live unto ourselves" as the



TWO OF THE WILD ASTERS.

At the left, "Aster Eremontii," with lavender colored rays, soft leaves and smooth stems. At the right, "Aster oblongifolius," with violet rays, stiff leaves and rough stems. Drawn from nature by Seventh grade pupils of the State Normal Training school.

ever, bloom chiefly in October. The
former are to be found on every hill-
side, in every canyon, beside many of
the city sidewalks, and along all the
waysides of the country places. Even
the sunflower does not dispossess this
charming and dainty mass of violet-
purple bloom; for upon venturing into
the midst of the ocean of yellow color
in the sunflower field, it was found that
the latter had not entirely usurped the
soil, but that in between the tall heli-
anthus patches and covering the hills
and bare places were bunches of a plant
from a few inches to a foot or so high,
that exhibited a beauty as lovely and
delicate as that of the sunflower
and commanding. This was the aster,
in three varieties, most usually of
a deep violet-purple color, but passing
through shades of lilac and lavender
to a pinkish white, and sparkling like
colored stars at the top of elegant
green foliage.

The aster is celebrated in song and
story, and is certainly worthy of the
"latter-day" homage it has received. A little
close observation finds that this deli-
cate specimen of wild weed improves
upon acquaintance. The pupils of the
nature-study classes at the university
was to approach it in this way:

A GENERAL VIEW.

What is (to you) the most striking
feature of the plant? What shades of
color do you see in the flowers of various
specimens? How does it compare
with the sunflower as to size, strength,
texture, and duration of its stem? In
the position, shape, size, and number of
its leaves? In the presence of smaller
leaves (bracts) on the upper stems? In
the nature of its surface, whether rough
or smooth, hairy or glabrous? Consider
the flowers—the number, shape, and size
of its heads; the number, color, size and
shape of the ray flowers; of the disc
flowers; the flower cup, or involucre
that contains the head of the flowers,
as to its cylindrical-bell shape, and the
number of rows of small leaves that
form it. As to the worth of this weed
—is it ornamental? Should it be exter-
minated? Stripped of its blossoms? Or
let grow and flourish? Have you seen
other like it, but with more numerous
ray flowers? These are the erigerons,
the fleabane of the eastern states. They
bloom in great profusion earlier in sum-
mer and in spring.

A CLOSE STUDY.

Coming to finer distinctions, observe
the stem, more closely—almost woody
(suffrutescent) at the base, and therefore
perennial; the leaves—long and slender
(linear); the flower-stalks that arise
from the axils, or inner angles of the
leaves; the peduncles, or flower-stalks
into which the flowerstalks divide; the
involucre with its small scales closely
appressed forming the cylindrical bell;
the oblong linear ray flowers without
stamens, but with bristly pappus, or
calyx down; the disc flowers (use a
lens) with yellow style projecting like
a two-tined fork; and the seed, or
achene, resembling a small pea, three
times as long as wide. Now comes some-
thing of more interest.

WHAT POLLEN GRAINS DO.

Fertilization is the process by means
of which the seed is made fertile or
ready to grow, through the operation
of the pollen grains in penetrating the
ovule and entering the ovule, or young
seed.

The familiar yellow dust of the aster,
of sunflowers and butterweeds is borne
by the stamens, and is the special stimu-
lant which is necessary to cause the
seeds to grow, and without which the
ovules, or young seeds, simply shrivel
and die. Little sacs (anthers) contain
the pollen dust, which is most com-
monly yellow or brown in color, but
may be red, green, blue, whitish, or
even black, and the grains are of va-
rious shapes with unique markings,
when seen under the microscope. Each
pollen grain, delicately coated with oil,
is filled with a liquid of a most nutri-
tious kind, and is the flesh-forming
food of the honey-bee, the bee-bread
also of the young grubs in the hive.
When a pollen grain falls upon a pistil,
the grain sends forth a minute tube
that penetrates the pistil and carries
this fluid down to one of the ovules
below, which it finds with unerring aim
and enters at an opening which every
young seed provides for this purpose.

Tomb of Virginia's Founder.

Captain John Smith's Body Lies in Ancient St. Sepulchre—The
Soul of the Great Englishman Goes Marching On.

IT HAS taken 200 years for Capt. John
Smith, the real founder of Virginia,
to attain his proper place in history.
The Jamestown exposition to be held
on the shores of Hampton Roads in 1907,
will prove to be a partial apotheosis of
this great Englishman. It is more than
probable that by the time 1931 comes
around the people of the state of Vir-
ginia will fittingly memorialize the
three hundredth anniversary of his
death.

Since 1631 his mortal remains have re-
posed in quaint old St. Sepulchre, in the
very heart of London. It was an old
church when he was buried there, dating
back as far as 1086. The Hon. R.
Walton Moore, a distinguished member
of the Virginia bar, who has a
highly developed faculty for unearthing
historic lore relating to his native state,
while in London recently, endeavored to
learn what new facts he could regard-
ing the last years of the great govern-
or of Virginia and admiral of New
England. "I believe," says Mr. Moore,
"the facts relating to the last years of
Capt. Smith's life are rather vaguely
known and that there is no record of
the place of his death. It is beyond
question, however, that he resided in
the parish of that church and we may
suppose that when he had become a
broken and lonely man, and was ap-
proaching the end of life's first love,
he found within its sacred precincts the
peace for which he longed."

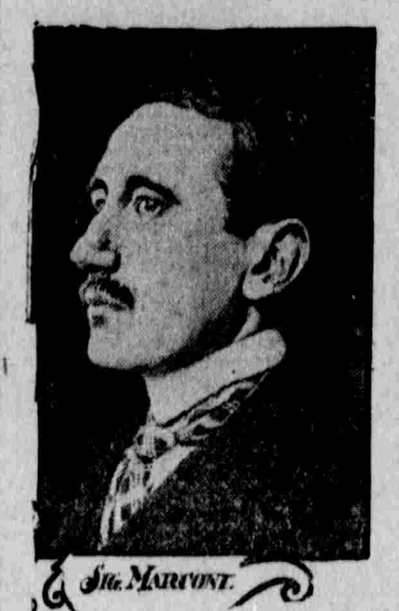
St. Sepulchre is one of the oldest
church edifices in London. It was first
built in 1099 and rebuilt in 1440. The
woodwork was destroyed by the great
fire of 1666, but the walls remained, and
the task of restoration was quickly un-
dertaken and completed. Its organ,
which is said to be one of the finest
in London, dates back to 1570. The
church has an interesting relation to
the ancient part of London in which it
is located. Near by was Newgate
prison, and it was the duty of the bell-
man of St. Sepulchre to ring a bell out-
side the cell of anyone confined there
condemned to death at midnight on the
eve of the execution, and at the same
time recite the verses whose concluding
lines are:

"And when St. Sepulchre's bell in the
morning tolls,
The Lord above have mercy on your
souls.
Past 12 o'clock."

The bell itself, which is really a small
metal anvil, is kept in the church, al-
though disused for many generations.
It was also the custom for the cart
which carried the condemned man from
Newgate to the place of execution to
stop at the church in order that he
might there be presented with a flower
which it was intended he should wear
to Tyburn. The last man who wore the
St. Sepulchre funeral flower was a dis-
ciple and follower of the notorious Jon-
athan Wild. As for the local setting of
the church, it may be mentioned that
not far off is St. Paul's cathedral, that
within 100 yards is the Old Bailey, and
that within sight is the open space
where the martyrdom of so many brave
spirits immortalized Smithfield. One of
the Smithfield victims was Roger, the
vicar of St. Sepulchre, to whom by

some has been attributed the first com-
plete translation of the Bible into Eng-
lish.
He declined a pardon offered upon
condition that he recant, saying, "That
which I have preached will I seal with
my blood," and, to quote the historian,
Milton, "Passed on, not as to his death,
but as to his wedding." The roar of
the traffic of modern London reaches
the church from Cheapside, from the
Strand, from Fleet street, from Ludgate
Hill, from the Smithfield Market, and
about it, over the less known thorough-
fares that hem it in, with its school-
house and yard of flowers, clamors the
varied and incessant activity of the
busy city.

"I found," continues Mr. Moore, "the
church closed, but managed to arouse
the headle, who is the most curious
looking little old man; attired in gold
lace, and plum-colored dress of his office,
that has ever lived outside of the books
of fiction."
"He, mumbling things I could not
understand, called the vergier, who
admitted me and never dreamed of
leaving me a moment after learning
that I was a Virginian and attracted to
the fact of his being a Virginian."



TO BREAK WIRELESS TRUST.

Delegates representing 31 govern-
ments are now assembling in Berlin
by invitation of the German govern-
ment with the object of reaching a
common agreement for an exchange of
messages between the users of vari-
ous wireless telegraph systems and to
define the basis on which private
wireless companies may operate with
the consent of governments.
One of the most important matters
to be settled by the conference will
hinge on the Marconi company's re-
fusal to interchange with the Sigs-
bee (German) system. Signor Mar-
coni himself is attending the confer-
ence as the delegate from Montenegro.

Without Alcohol

A Strong Tonic	Without Alcohol
A Body Builder	Without Alcohol
A Blood Purifier	Without Alcohol
A Great Alternative	Without Alcohol
A Doctor's Medicine	Without Alcohol
Ayer's Sarsaparilla	Without Alcohol

We have no secret! We publish
the full list of our preparations.

the church by the memory of Capt.
Smith. The body of the founder was
undoubtedly borne into the church that
day of his burial in June, 1631, after
the weariness of mortality had finally
overtaken him, through the same iron
gate which was opened to me, across
the splendid fan-vaulted porch into the
church, and was then laid away under
the chancel. To mark the spot a gray
stone slab was placed over it bearing
heraldic devices and a rhyming tribute
to his exploits and virtues. All that
was originally figured or written on the
stone has been worn away, except that
the vergier assured me, when he had
kneelt and carefully brushed away the
dust, that he could discern the three
Turks' heads which we know were
carved on the escutcheon.

The slab has been removed from its
first position to one of the aisles, and
in the wall opposite to it has been
placed a brass tablet in a wooden
frame, which repeats the inscription
which the stone once bore, beginning:
"To the memory of his deceased friend,
Captain John Smith, sometime Gov-
ernor of Virginia and Admiral of
New England, who departed this life
the twenty-first day of June, 1631.
'Accordamus, Vincere est Vivere.'"

Following this are 26 lines of verse,
as follows:
Here lies one conquered that hath
subdued large territories and done
things
Which, to the world impossible would
be.
But, that the truth is held in more
esteem.
Shall I report his former service done
In honour of his God and Christen-
dom?
How that he did divide from Pagans
three
Their heads and lives, types of his
chivalry.
For which great service in that cil-
limate done,
Brave Sigismundus, king of Hungarion,
Did give him as a coat of arms to
wear.
These conquered heads, got by his
sword and spear.
Or, shall I tell of his adventures since
Done in Virginia, that large conti-
nent?
How that he subdued kings unto his
yoke,
And made those heathen flee, as wind
doth smoke.
And made their land, being of so
large a station,
An habitation for our Christian nation,
Where God is glorified, their wants
supply'd;
Which else, for necessities, must have
dy'd.
But what avails his conquests, now he
lies
Interred in earth, a prey to worms
and flies?
O! may his soul in sweet Elysium sleep,
Until the Keeper, that all souls doth
keep,
Return to judgment, and that after
thence,
With angels he may have his recom-
pense.

In conclusion, Mr. Moore says:
"Nearly opposite the slab on the
other side of the aisle is the pew oc-
cupied by the lord mayor of London,
when once a year he goes to St.

Sepulchre on Sunday, riding in his
state coach, preceded by the city
marshal on horseback, and attended
by sheriffs and aldermen.

"They all wear their robes and in-
signia of office, and an iron sword
rest is attached to the end of the pew
to hold the lord mayor's sword while
he is at worship. The secretary of
the British museum and some of the
subordinates are, as I found, well in-
formed touching the colony of Vir-
ginia and its founder, and can it be
believed that these London officials
are so well informed, and that when
they make their annual pilgrimage to
St. Sepulchre, they fail to recall some-
thing of the shining services rendered
by Smith to the cause of human pro-
gress?"

"The church records prior to 1632
have been destroyed, but I had it
from the vergier that investigation of
such records as exist show that since
that time the church has furnished a
last resting place for more than eighty
thousand persons. As many as four-
teen hundred and ninety-five of those
who perished in the great plague were
buried there, the number one day
reaching forty. In all of this silent
company the name of just one man
stands out conspicuously—the name is
so constantly in the minds and on the
lips of Virginians in this anniversary
time. I talked with the vergier for
an hour in the half light and cool
shadows of this church, the heavy Eng-
lish walls dulling the sounds of the
throbbing world outside, and then I
went away realizing that no other
spot in London can ever have for me
quite the same interest as the burial
place of the Virginia soldier and states-
man who has been sleeping there
nearly three hundred years."

IS THE MOON INHABITED.

Science has proven that the moon has
an atmosphere, which makes life in
some form possible on that satellite;
but not for human beings, who have a
hard enough time on this earth of ours,
especially those who don't know that
Electric Bitters cure Headache, Bilious-
ness, Malaria, Chills and Fever, Jaun-
dice, Dyspepsia, Diarrhoea, Torpid Liver,
Kidney complaints, General Debility
and Female weakness. Unequaled as
a general Tonic and Appetizer for
weak persons and especially for the
aged. It induces sound sleep. Fully
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112 and 114 So. Main St., druggists.
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323 West First North.

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For Clerk,
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Scriptures make plain, but even the
flowers cannot do so.
Selma Gaye declares that the golden
rule for flowers is: "Get fertilized!
cross-fertilized if you can, self-ferti-
lized if you must." It is the insects that
do for these flowers, what the latter
cannot do for themselves. Creeping
insects are not, as a rule, useful visi-
tors for flowers, and various are the
devices which the latter exhibit to keep
them out. But flying insects of all
kinds, even to the smallest flies and
midges, get dusted with the pollen and
carry it from one blossom to another.
The beautiful ray-flowers of the aster
have no style and stigma, hence their
seeds cannot be fertilized, but remain
sterile; while the inner or disc flowers
develop fertile seeds. What, then, are
the lovely ray flowers for? They tell
the bees and butterflies that the aster
has something good for them—a tiny
drop of nectar at the base of each cor-
olla tube. Now, since this nectar is
of no use to the flower itself, it must
be put there simply to attract the
winged tribes—a bait to invite its
friends to a feast of pollen and nectar,
for these friends are highly serviceable
to the plant. The nectar is hidden
deep down in the flower amid the com-
pressed heads of the composite order,
so that ants, beetles, worms and other
creatures without wings can barely it
at all reach it. But the bees, moths
and butterflies push their long tongues
down into the flower tubes and drink
up the nectar. As they do so, they get
covered with pollen dust, from the
stamens which cling around the pistil.
All bees are hairy, the hairs themselves
often being bristly or webbed, while
in the rough or spiny pollen grains cling
all the better for the various devices of
their own coverings. The bee has to
visit many flowers before its crop is
filled with nectar, and in so doing car-
ries the pollen from one flower to an-
other, chiefly to the same kind of flower
on any one visit, and so performs
for the flower the great service of
sprinkling every pistil with its own
kind of pollen grains, since any other
kind would be useless.

HUMAN BLOOD MARKS.

A tale of horror was told by marks of
human blood in the home of J. W. Wil-
lams, a well known merchant of Bac,
Ky. He writes: "Twenty years ago I
had severe hemorrhages of the lungs,
and was near death when I began tak-
ing Dr. King's New Discovery. It com-
pletely cured me and I have remained
well ever since." It cures Hemorrhages,
Chronic Coughs, Settled Colds and
Bronchitis, and is the only known cure
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OGDEN AND RETURN, \$1.00

Via D. & R. G. Sunday, Oct. 21.

Leave Salt Lake 10:25 a. m. and 1:45
p. m. Returning leave Ogden 7:00 p.
m. Street cars to the mouth of O-
gden Canyon direct from the Union De-
pot.

Mince pie made from Mount's Mince
Meat is the seasonable delicacy.

Dr. Talmage's new book, "The Great
Salt Lake (Present and Past)," should
be in the hands of every educator. The
amount of information it contains re-
lating to the great saline sea, makes it
an invaluable work for reference or
study. Deseret News Book Store, Salt
Lake City, Utah.