

Plant Observation

FES Intensive Seminar

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Tsuyukusa (Asiatic Dayflower)

1. Objective Perception

Tsuyukusa (Asiatic dayflower) never stops attracting me.

It begins blooming around the summer solstice in June.

Its flowers survive the rainy season and scorching hot weather, and last for a long time -- until around September.

Tsuyukusa gently swaying in the wind brings about a refreshing feeling in the mid-summer sunlight.

《Leaves》

A shoot consists of two leaves and another smaller leaf.

The leaf does not have a stalk, but does have a line in the middle and a pointed cusp.

The leaves are arranged alternately, as if embracing a stalk, and grow in a spiral formation.

The three leaves gradually separate one by one and embrace the stem again. Then, a spathe comes out from near the base of the three leaves to bear flower buds. This pattern is repeated. The spathe has obscure lines. The pale green leaves are striped with reddish purple at their base.

The leaves near the root are small, and get larger toward the top.

Leaves on one stem in aggregate form an inverted triangle facing the sky.

《Flowers》

Flowers are small, measuring 1.5 to less than 2 cm.

A flower bud is formed in a doubled-up half-moon-shaped spathe whose form and structure are completely different from those of the leaf.

If you pry open a spathe, you can see that it is heart-shaped.

Inside, there are already several flower buds, and a degraded main axis sticking out from its base.

When the flower blooms, the spathe opens like a door. When the flower withers, the spathe closes as if to tuck it inside.

The flower has three petals -- two blue ones that stand up like a mouse's ears, and a white (transparent), small, pointed petal that faces down.

The two petals are very thin and transparent, but vivid blue.

The form of the corolla is a variant of a cup lying sideways. It has three transparent calyxes.

The flower is shaped like an inverted triangle.
The flowers face in all directions.

The androecium consists of a set of different-sized stamens centered around the stalk — the three nearest to the center are the shortest, one a little bit away from the center is longer, and the two outermost stamens are the longest. Only the two longest stamens that stick out have pollen.

Stamens without pollen are near the center of the flower, and are prominent due to their yellow color.

A single pistil sits between the two long stamens.

《Stems》

The pale green hairless stems are striped with reddish purple.

They look dark brown toward the root.

The stems covered with soft skin are stuffed inside. When they are broken, they do not snap, but leave long fibers.

Several nodes are formed, and from them new stems come out. Roots come out from there later.

Some stems spread horizontally, while others grow vertically.

《Roots》

Several thick roots stick out of the ground. If dug out completely, the roots can be seen to have thin fibrous roots growing from them. The smaller roots growing from the stem are pale green. Those growing from a water-cultured plant are white.

《Seeds》

Seeds are formed about one month after sprouting.

Three to four seeds are found in a spathe that has dried and turned brown.

The brownish-grey seeds have uneven surfaces that appear to have holes. Their shape is that of a bullet split vertically in half, with a half-moon-shaped bottom. The seed measures 2 to 3 mm, and is light.

《Space for Growing》

Seen directly from above, the tsuyukusa plant diffuses in a radial manner. Its average height is about 20 centimeters.

After a few flowers bloom, the plant gradually lies down as if crawling on the ground, but if other plants grow vertically around it, the tsuyukusa does as well, to a height of about 50 centimeters, as if cuddling with the other plants, instead of winding itself around them as climbing plants do.

The plant may trail horizontally along the ground when there are no other plants alongside it.

When the environment is difficult for survival, the plant may try to grow vertically, using other species.

《Relationship with the Environment》

The tsuyukusa likes a moist environment for its habitat.

It lives in sunny places and in shady areas facing the north, if it is relatively light.

Tsuyukusa is often seen on roadsides where there are many types of plants which are called “weeds.”

《Relationship with the Animal and Mineral Kingdoms》

Tsuyukusa draws ants, small moths and drone flies.

It sprouts even in cracks in concrete where there is no soil.

For pollination, it does not appear to have cooperative relationships with other living things, but seems to allow them to live with it for survival.

《Relationship with four elements》

The flowers wilt in strong afternoon sunshine. When the plant begins to dry, the leaves roll up or wither.

The flowers are fresh, and their translucent color gives an impression of transparency.

Given that roots came out only in water in a vase, I strongly sense the plant’s strong relationship with water among the four elements. On the other hand, given that the flowers bloom even in rain, I think it lacks the element of fire.

《Time and Seasonal Cycle》

Tsuyukusa is an annual herb that blooms between June and September each year, and newly sprouts the following year. When it is hot, the plant’s flowers begin to open before 6 a.m., and wilt before noon. Even after the sunshine becomes mild, the flowers wilt shortly after noon.

Tsuyukusa is not affected by weather conditions. It blooms the same way even in strong sunshine, cloudy weather and rain.

In strong sunshine, the leaves roll up inside to minimize water evaporation.

《Sensible Observation》

As the name tsuyukusa (literally, “dew herb”) suggests, it looks beautiful when its leaves are covered by morning dewdrops.

The surface of the leaves is rough to the touch, which may help them to hold dewdrops.

They do not have a strong scent that would attract insects, nor a distinct taste.

In the mouth, both the flowers and leaves are crispy, which makes me feel refreshed.

The plant as a whole gives an impression of softness with a lot of air taken into it. Only the part near the root is hard.

With a great deal of originality, Tsuyukusa is composed of solid shapes, and has a mechanical structure.

When I tried to photograph tsuyukusa, I had to hold it with my hand, as it easily sways even with a mild wind.

The plant gives me the impression of air. But it is delicate and vulnerable even to minor stimuli.

《Colors》

The vivid blue gives a long-lasting impression in our hearts.

Blue Yellow Yellowish Green Reddish Purple Brown

The colors of tsuyukusa appear to correspond to the chakra colors of the upper part of the human body.

2. Creative Perception

《Imagination from the Flowers》

Looking at the flowers that mechanically stand up vertically from the heart-shaped spathe which opens and shuts when necessary, I sense the mechanical aspect of this plant's development. Tsuyukusa appears to be sending its messages to us, living in real society, not in the future or the past, not above (in heaven) or below (Earth).

The delicate flowers tell us that we should open our minds only when necessary.

The sunlight is especially mild in the morning, so it is said that when we are exposed to morning sunlight, the conditions of our autonomic nervous systems improve. This fact probably tells us the importance of adjusting our biological clocks.

The petals that remind us of ears and the dummy stamens appear to tell us that we should concentrate so that we can grasp only the truth among an abundance of information.

Tsuyukusa tells us that we should increase the speed at which we grasp information, sharpen our ability to make calm judgments, use our creative power for others, and communicate with others with compassion and the quietness of morning sunshine.

When we are shaken by outside stimuli, the flowers help us remember that all the truth is inside ourselves, and that we should restore ourselves by recalling insights from our experience. They also tell us to live our own lives.

Tsuyukusa uses the element of “yin” — namely, centrifugal force.

The look of the plant that trails over the ground expresses “yang” functions, which transit the momentum of power to centripetal force. This is to say, tsuyukusa keeps its balance by using its whole body.

The flowers tells our nerves, which tend to be exhausted from strong stimuli and information

overload, that we should slow down, and take a good rest to revitalize ourselves. If we firmly ground ourselves, they encourage us to stand up again.

Tsuyukusa appears to tell us that although everything can be complete in ourselves, expressing ourselves to others is to convey the truth, and that it is necessary to live in harmony with others in society.

After repeatedly experiencing words and civilization possessing the speed of bullets and explosive power, the soul can recover true society in which people live in harmony with nature by digesting such experience. Tsuyukusa tells us how wonderful it is that humans can develop.

The Zen phrase “Hibi kore konichi (Every day is a good day)” teaches us that we should be stable emotionally when it’s fine or rainy, or whatever the weather is like, and spend each day so that we can look back and think that it was another good day.

Tsuyukusa reminds me of this phrase because the plant blooms in any weather conditions during summer, the season when conditions change in the harshest way.

《Affirmation》

Our hearts have brilliant visions.

Beautiful souls fostered in quiet time unify extreme aspects inside us.

We are released from suffering felt by anyone.

I am here.

Passion that easily changes and fades fills us when the time comes.

If we start over again and again with refreshed feelings, and we are in silence, we will never be conquered by strong power.

Newly-born lights come from a large source that we embrace.

Let’s accept all and trust the source.

We always resonate in the joy of loving each other.

3. Literature Research

*1.2.14

【Classification】Family: *Commelinaceae* Genus: *Commelina*

【Scientific Name】*Commelina communis*

Commelina. Three 17th-century Dutch botanists were named Commelin. Two of them became famous while the other did not. It is said that Carl von Linné named the plant after the three botanists, as the flower has two

distinctive petals and one indistinct one.

Communis. Common

【English Name】*Asiatic dayflower* (flower in Asia that wilts in a day)

【Description】 Color of flower Blue

Petals 3

Stamens 2 (+4)

Pistil 1

Height 20 to 50 cm

Flowering season June to September

Annual herb

【Distribution】All over Japan

(commonly seen in vacant lots near residential areas, plains and the roadside)

Southern parts of China, the Korean Peninsula, India

【Origin of Name】

The name tsuyukusa (dew herb) is from an herb like the spirit of dewdrops.

Its old name was tsukikusa (staining herb), as its flowers' juice often stained clothes. Until indigo was made commonly available, tsuyukusa was used for a blue dye.

It also has the elegant name of tsukikusa (moon herb), as its petals were pounded (tsuku) in a mortar to make dye, and the sound of "tsuki" remained.

Other names include boushigusa (hat herb), aibana (indigo flower), hotarugusa (firefly herb), utsushigusa (dying herb), aobana (blue flower), hanadagusa (light indigo herb), etc.

【Floral Language】Respect

【Description of Flower】*12

Four dummy stamens without yellow pollen draw insects.

More than 90 percent of tsuyukusa plants self-pollinate.

Before a flower wilts, stamens and a pistil along with the petals are rolled up like a coil spring and wrapped in the spathe. It is believed that this process is for the plant to bring back all nutrients to itself.

In fact, the inside part of the flower melts into a mushy state so that nutrients are absorbed for a new flower.

Here is an indication of a strong element of bisexuality.



The degraded main axis on the left. Sometimes, a flower blooms on the main axis, creating a spathe with two flowers.



【Same Family】*12.13



Oboushibana

Scientific Name : *Commelina communis* var. *hortensis* Makino

The plant is distributed across Japan, China, the Korean Peninsula and western Russia. It has

gone wild in some areas in North America. It has thick stems, and is two to three times taller than tsuyukusa. This species is used for a dye in Japan.



Shirobana Tsuyukusa

Scientific Name : *Commelina communis* L.f. *albiflora* Makino A mutation of tsuyukusa



Murasaki Tsuyukusa

Scientific Name : *Tradescantia reflexa* Rafin.

Native to north America, the plant begins bearing flowers in June. Unlike tsuyukusa, it bears a lot of buds, which open one after another. So it does not look like a species of dayflower. Since the plant produces flowers for a long time, it is often used for observing osmotic pressure or meiosis. The number of chromosomes is $2n=12$. The variety with $2n=24$ is called O-murasaki tsuyukusa.

【As Dye】

It is said that the flower was often used for drawing sketches for Yuzen-zome dyeing since its pigments are easily dissolved in water, and fade.

It is said that there was a worldwide controversy over this unstable blue pigment.

The pigment consists of anthocyanine and a flavone-related substance (note; Anthocyanine is a type of flavonoid and an antioxidant).

The pigment is called commelinin, a kind of metal complex. It was named after commelina, the scientific name of tsuyukusa, when a group of Japanese flower pigmentation researchers successfully crystallized it as a chemical substance for the first time.

Aobanagami (blue flower paper) is traditional Japanese paper saturated with the juice of day flower petals. Craftsmen use wet brushes to let the blue seep out, and draw designs on cloth.

Also used for this purpose is oboushibana, a horticultural variety of tsuyukusa whose flowers are as large as 4 cm in diameter. Today only 4 farmers in Kusatsu City, Shiga Prefecture, grow

the plant in Japan.

【Effects of Colors】*3

Sunlight changes color during the day, with various tones that shift over time. The dark blue light that covers the sky before dawn turns into light blue that wraps morning air. In the afternoon, the light becomes yellowish, and then turns reddish in the evening.

In summer, sunlight makes green look deeper.

Color therapist Theo Gimbel says blue is effective when one faces a tense situation, and that it works on asthma, neurosis and insomnia.

Colors close to blue calm down and relax the body and lower blood pressure.

Therefore they are effective for treating insomnia.

According to the color scheme of Rudolf Steiner (1861–1925), blue is used for restless patients in color therapy.

Our hearts are filled with images of colors, and our reactions to colors are controlled by the associated images created from our own experience or from traditional ideas rooted deeply in our minds. The common expression “I feel blue” is an example of a learned association that connects sadness and the color blue.

According to the idea of human body chakras, blue is in the center of energy from the thyroid gland, and plays a central role in creative expression through sounds. It is important both in terms of communication and psychology.

In chakra theory, yellow constitutes the solar plexus, and is the light that appears in the nervous system. It is in the center of our recognition and self respect. An uncertain situation causes stress there. *3

An inverted triangle, the shape of the flower, focuses energy downward. So it appears that the energy of the blue color is flowing toward the yellow of stamens in the center of the flower. This tells us that energy flows to improve our ability to digest things by balancing our communication.

【As Medicinal Herb】*9.10.11

[Medicinal Properties]

Alleviation of fever; diuresis; detoxification; common cold; febrile diarrhea; tonsillitis and sore throat; dropsy; prevention of heart diseases and cerebral thrombosis; eye diseases; eczema; skin rash; insect bites; swellings

(*In China, leaves and stems are used for medication for fever alleviation, diuresis and detoxification.)

[How to Use]

- Reap the whole tsuyukusa plant in the flowering season, wash with water and sun-dry it in an airy place.
- Put 5 – 10 grams of dried tsuyukusa into 300 – 400 cc water, and decoct it on low heat for 15 – 20 minutes. Drink the decoction up to 3 times a day.
(If you find it a bit too bitter to drink, add honey to make it sweeter.)
- Apply the decoction to the skin. For insect bites, apply ground fresh leaves.
- For eye problems, clean the eyes with the juice of flowers.

- For food, boil fresh stems and leaves for salad or for dressed vegetables.

【Comparison with Another Flower Essence】*5.6.7

Bach's rockrose has the Japanese name hannichi bana (half-day flower). It wilts in half a day, like tsuyukusa.

The scientific name of the rockrose/ *helianthemum mumularium* comes from Helios (the Sun) in Greek. In Latin, it means "gold coin."

Unlike tsuyukusa, it has yellow and pentacle-shaped flowers. If the rockrose is the spirit of the sun, tsuyukusa must be the spirit of the moon.

Tsuyukusa carries blue light that was born from the dark night.

Why don't they bloom throughout the day like many other flowers?

Both appear to have created borders in time.

Those who need rockrose flower essence harbor a fear of death, suicide and mystic power beyond the laws of nature. Tsuyukusa may express fear of birth, resonating with humans. This is because transmigrating souls unconsciously bear painful memories of experiences that they went through in this world.

According to Japanese mythology, 3 gods -- Amaterasu Oumikami (the Sun Goddess), Tsukiyomi-no-mikoto and Susanoo-no-mikoto -- were born in the same period. Tsukiyomi is the god who wets the night.

If the rockrose absorbs the pure light of the life from the sun and reflects it, tsuyukusa illuminates the limpid dew created by the energy of the moon in the divine time of midnight hours.

The rockrose grows in hilly pastureland and dry rocky areas in southern parts of Britain, while tsuyukusa grows in damp ground and shady areas. Their habitats are different, as are their flowers and leaves. But both first extend as if to creep on the ground, and later grow vertically. With short-lived flowers, both tsuyukusa and the rockrose expand inch by inch, apparently to tell us that we should overcome our fears to reach the truth in this world, and express our existence in our own way.

【Flower Loved as Man'yoka】*8

Man'yoka (Man'yo flowers) are believed to have been in Japan since ancient times.

Flowers written about in poems in the Man'yoshu (the earliest extant collection of Japanese poetry) are called Man'yoka in Japan, and Tsuyukusa is among them.

The flowers were loved by people who lived in the clean, natural environment of Japan 1300 years ago.

●鴨頭草に衣色どり摺らめども 移ろふ色といふが苦しさ

(Tsukikusa ni koromo irodori sumaredomo utsurouiroto iuga kurushisa.)

[Meaning]

Although I want to dye my cloth with tsuyukusa, it is depressing to hear that its color changes so easily.

[Another meaning] (expressing a woman's worry about her lover's possible unfaithfulness)

I think I will accept a man's marriage proposal, but it is depressing that his heart would change easily, like the color of tsuyukusa that fades soon.

【Insights from Literature Research】

The effects of the color blue — calming and making breathing easier — and the plant's relationship with water found in observations of the energy of the thyroid gland in chakra theory are linked with the herb's efficacy.

I expect tsuyukusa to be effective for today's lifestyle-related illnesses, as substances contained in the flowers have antioxidation effects. The feeling of water in the concept of Yin-Yan and Wu Xing (five elements) indicates fear. *10

The ancient poem about the poet's hidden feelings also contains worries. Tsuyukusa appears to be sending its message to fears that have yet to come.

The blue of tsuyukusa that fleetingly disappears has been used for drawing sketches of Japanese folk costumes.

The blue seems to have been already imprinted in the blueprints of our memories.

The energy of the moon is a theme of meta-level one. Tsuyukusa heals habits that had been already formed by the time the soul begins to dwell in the body. This may be related to body-fluid-level issues including that of semen.

The energy of tsuyukusa's blue flows to yellow, possibly to heal fears of something unknown that come from our traumatic memories of the distant past world or from our habits, the fears felt when we were born, and even the nervous system that was harmed by the fears at the time of birth.

Key phrases: Fears felt at the time of birth / Karma from the past world / Blueprints / Transmission of information / No. 5, No. 3 chakra

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