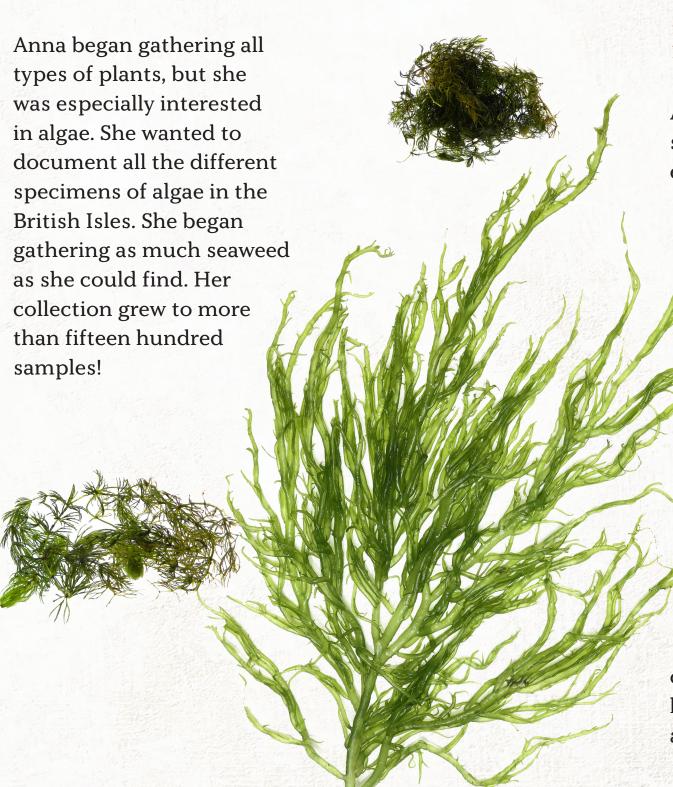


# \*Anna \*Atkins

#### A Scientist is Born

On a misty spring day in the southeast of England, in the county of Kent, a beautiful baby girl was born. Her adoring parents didn't know it, but she would grow up to become an accomplished scientist. She would even change history. But on this day in 1799, in the town of Tunbridge, she was just a precious infant snuggled in the loving arms of her mother. Her parents named her Anna.





## DID YOU KNOW?

Algae produces more than seventy percent of the earth's oxygen. Without algae, life could not flourish on Earth.

Thousands of different kinds of algae grow in various colors and forms and can be found everywhere on the planet—even on snow and ice.

Fossilized algae are used to make dynamite.

In some areas of the Indian Ocean, the sea surface lights up so brightly at night that one can read a newspaper. This light is caused by tiny sea algae, the Dinoflagellata.

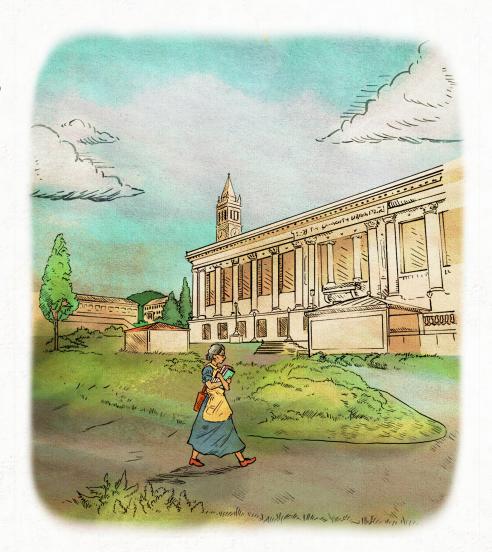
# \*\*Mnes \*\*Mexia

#### An Independent Explorer



Ynes Mexia walked onto the campus of the University of California, Berkeley. She took a deep breath, thrilled to be at the school for her very first day of classes. She ignored the strange looks she received from other students walking by and, clutching her books close to her chest, set out to find her first class: Natural History.

It was 1921, and Ynes was different from all the other students. Her short white hair and pattern of fine wrinkles made her stand out among the other fresh-faced college students. You see, Ynes was fifty-one years old—three decades older than most of the other students! She didn't mind, though, because she had finally discovered her passion in life and was eager to learn.





Shortly after starting college, Ynes was invited on a botanical collecting trip to Mexico. Her Mexican heritage was an asset while traveling because she could speak the language and felt comfortable with the native people she encountered. Shortly after she arrived in Mexico, she decided to leave the organized group; years of being alone made her feel comfortable striking out on her own.

It was virtually unheard of for a woman to travel alone in the 1920s. Ynes later wrote about this time, saying, "A well-known collector and explorer stated very positively that 'it was impossible for a woman to travel alone in Latin America.' I decided that if I wanted to become better acquainted with the South American continent, the best way would be to make my way right across it."

#### DID YOU KNOW?

Botanical collecting is a slow and labor-intensive process.

To locate new plants never collected before, a botanist often travels deep into the unknown wilderness.

If the plant is small, the botanist must carefully unearth the entire plant, being sure not to damage the specimen or its roots.

If it is a large or heavy plant, such as a tree, a sample must be carefully pruned off in a way that will not damage the plant.

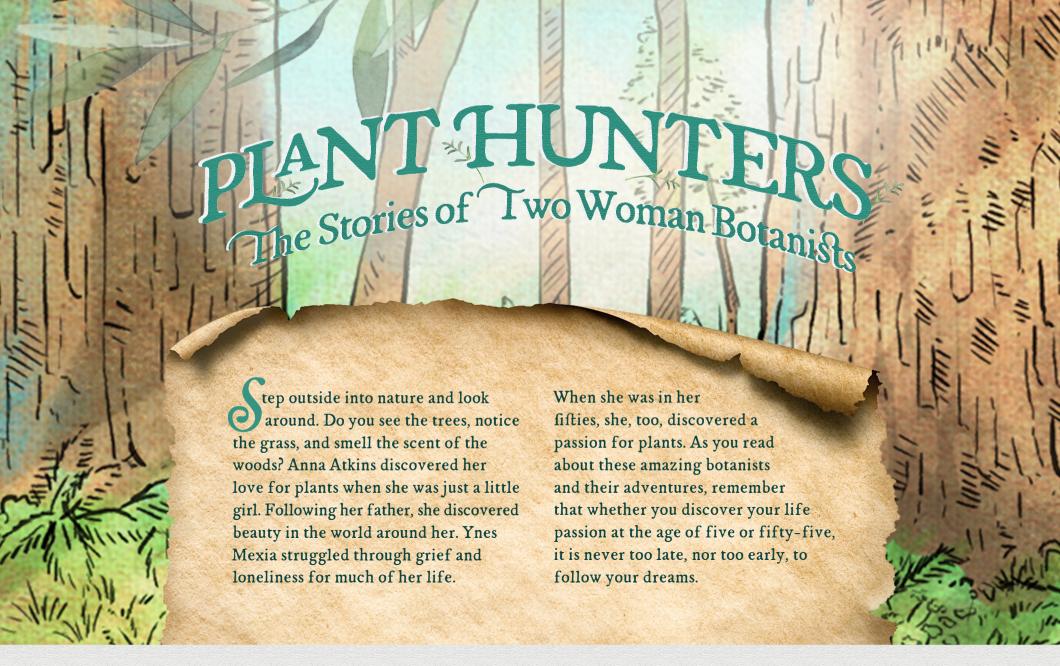
Often a plant must be dissected to properly identify it before pressing.

Once collected, the plants must be pressed, allowed to dry completely, and stored for shipment.

Eventually, the plants are labeled and sold to museums and herbariums.

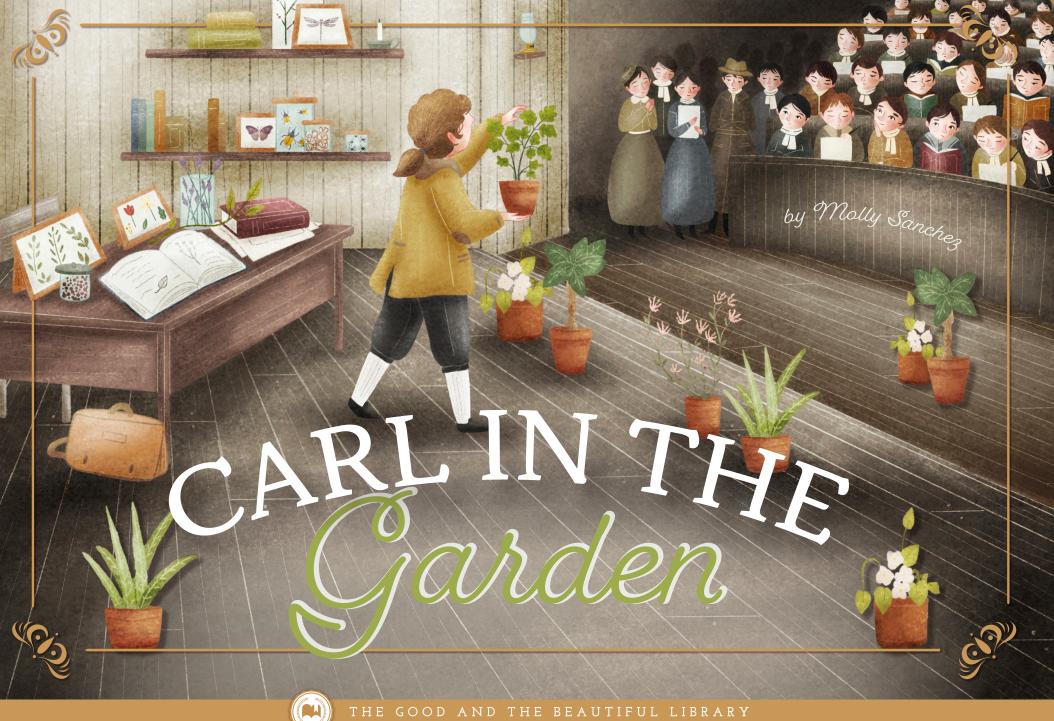












n a small village in Sweden lived a **L** small boy named Carl Linnaeus. Despite the poverty of his family in the early 1700s, his minister father had a very rich garden, bursting with fruits and vegetables to feed the family, and flowers and leafy wonders to feed their souls—for so it was with little Carl. Even before he could walk, his parents would console his cries with a flower, which he admired both with his eyes and his chubby baby hands. His toys were flowers.





Carl," said his father. "We don't want to damage a single delicate plant." And so little Carl would lift his short legs up and over each plant, careful not to hurt them. His little fingers gently caressed the plentiful blossoms of various shapes, sizes, and colors.

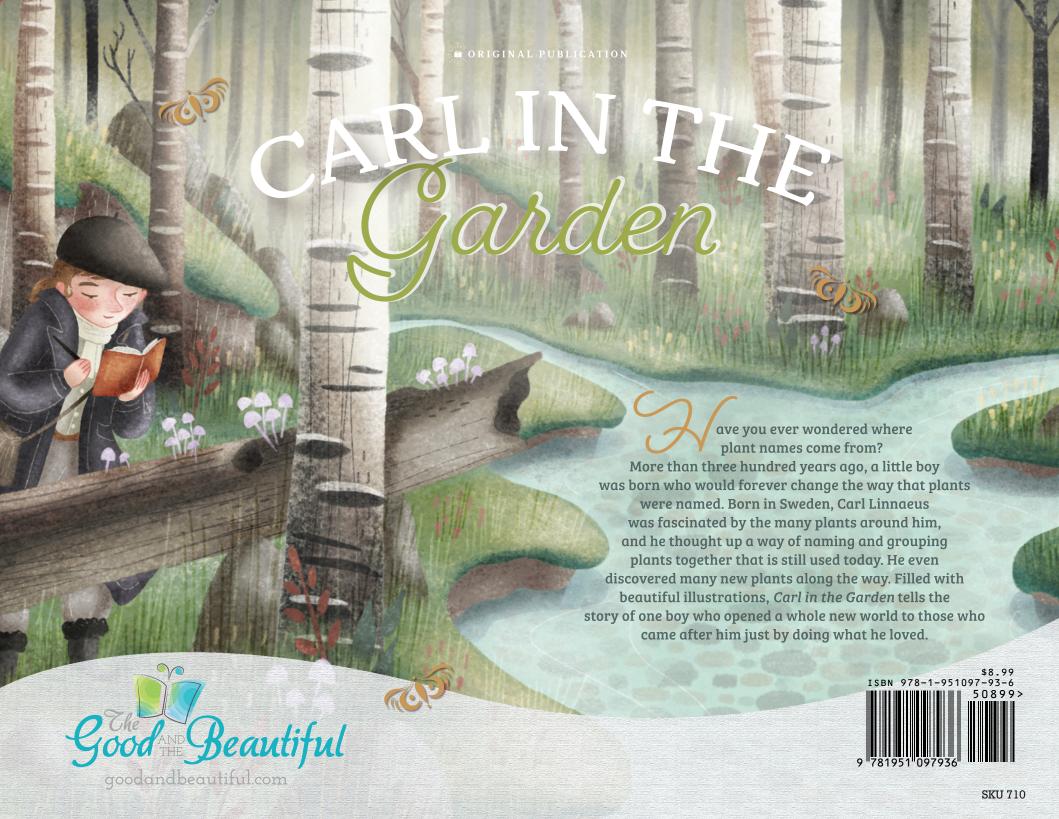
It was not long before Nils became frustrated with his son's transplants. "Carl, what is this?" he asked, exasperated. "My peaceful garden has become a battleground, with these savage bees and wasps, not to mention the weeds you've introduced that are spreading like thieves into my nursery. You must not bring pests to our garden, flying or rooting!" After that, Carl was more careful.

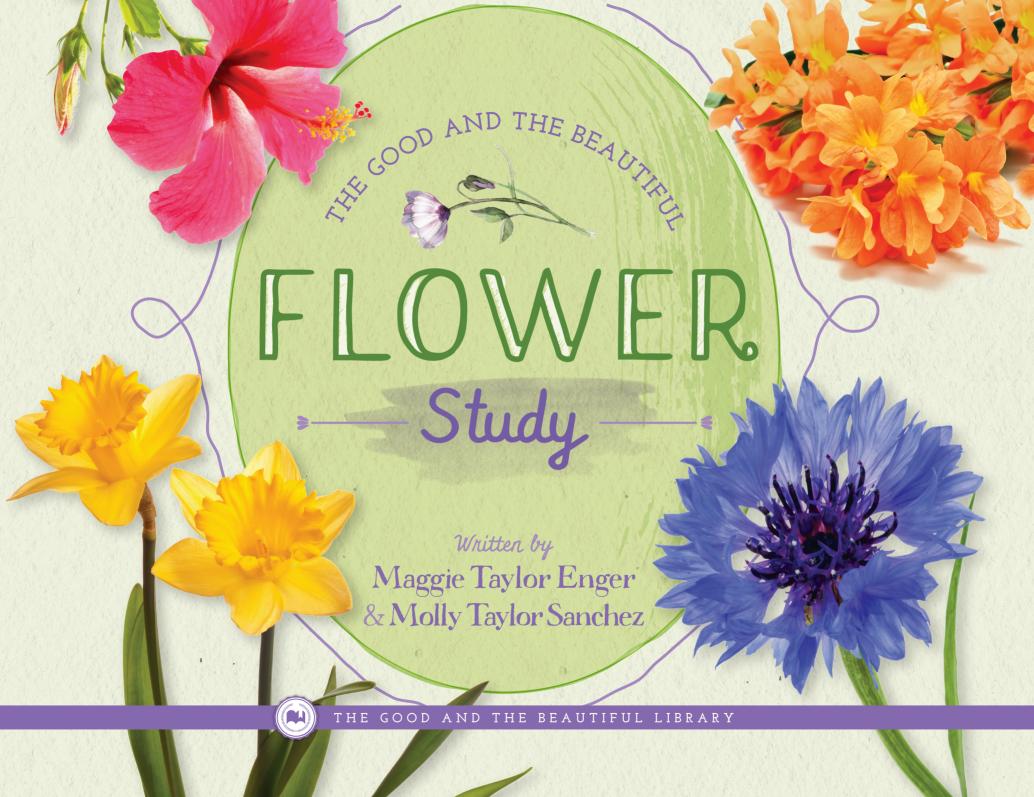






"I am going to collect as many books on botany as I can!" Carl decided when he was a teenager. At seventeen he was moved to an upper school where he was taught literature and subjects necessary to become a minister. Such subjects were painful for Carl. "I do not wish to be a minister! I want to study plants," he declared.





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# Columbine

A favorite among hummingbirds, columbines are hardy wildflowers found all over the northern hemisphere.

#### Flower Study €

Columbines come in a variety of lovely colors and are quite easy to recognize once you're familiar with their unique shape. Look at the picture below. Every columbine has five modified petals with both a blade and a spur. The petal spur is shaped like a long horn ending with a knob and is filled with nectar, perfect for hummingbirds and long-tongued insects. The petals are surrounded by five colorful sepals in the shape of a star.









## Dahlia

Did you know that the dahlia was originally classified as a vegetable, not as a flower? That's because the root of the flower is an edible tuber, kind of like a potato! The undeniable beauty of the flower top, though, has made them popular in gardens worldwide. Dahlias come in almost any color and size; some are as small as a button and some can grow as big as your head!

#### 🍃 Flower Study 🐔

Look closely at the petals of the dahlia. Do you see how each petal curls into itself? Notice how the innermost petals curl the most. The many rows of petals on the dahlia flower create a delightful pompom look.





Type: Perennial
Scientific Name:
Dahlia spp.
Family: Asteraceae
Native to: Mexico
and Central America









Type: Perennial
Scientific Name: Gardenia spp.
Family: Rubiaceae
Native to: Tropical and
subtropical regions of Africa,
Asia, Madagascar, and the Pacific
Islands



# Gardenia

Gardenia, which grows in tropical and subtropical climates, is part of the coffee family. The creamy-white flowers of these woody evergreen shrubs have an intensely wonderful fragrance.

#### Flower Study <</p>

Look at the white gardenia petals in the picture above. Imagine plucking one of the petals off and rubbing it gently across your cheek. Can you imagine how velvety soft it must feel? Notice the dazzling spiral shape of every gardenia flower. Even the flower buds are in the form of a spiral!





Lilacs grow on bushes that can grow as tall and as wide as a small house! Think carefully where you want to plant a lilac bush, because it can live 200 years! The summer blossoms smell incredible. Try never to miss a chance to sniff blooming lilacs if you pass them.

Scientific Name: Syringa spp.

Family: Oleaceae

Native to: Eastern Europe and Asia

#### Flower Study €

Grab a piece of paper and a pencil and draw a lilac flower. Look closely—is your drawing perfectly symmetrical? Take a moment to consider how amazing it is that each of the tens of thousands of simple four-petal blossoms is perfectly symmetrical!



# Type: Perennial majalis Family: Asparagaceae

# Lily of the Valley

These dainty, fragrant, bell-shaped flowers become red berries after the petals drop. But don't eat them! Every part of this plant is poisonous. It makes a charming ground cover for cooler, shaded areas.

#### > Flower Study <

If you were the size of a field mouse, wouldn't it be lovely to pretend you were in a symphony playing these bells? Picture yourself sitting on the strappy green leaf. Imagine that each delightful bell has a different sound, and you create a melody as lovely to the ear as the flower is to your sight and smell.

Native to: Asia and Europe



### Plumeria

You may recognize these flowers as those sometimes used to make Hawaiian leis because of their large size, lovely scent, and appealing colors. They are most fragrant at night to entice sphinx moths to pollinate them. They are tricking the moths; they actually have no nectar.

Type: Perennial
Scientific Name:
Plumeria spp.
Family:
Apocynaceae
Native to: Central
America, Mexico,
and the Caribbean

#### Flower Study €

Have you ever held a plumeria? They have a sturdy, rubbery feel. Look at the center of the flower and how it extends outward in a fantastic spiral. Imagine stringing plumerias together to make a beautiful lei. What colors would you use? To whom would you give your fragrant lei?















## Ranunculus

If you want to grow flowers perfect for cutting and using in arrangements, try the ranunculus. Its tall stem is perfectly straight and strong, and the mesmerizingly beautiful flower heads, which come in a variety of bold colors, are enough to make any bouquet glow.

#### ► Flower Study ■

Can you imagine trying to count the layers and layers of soft, thin ranunculus petals, all tightly bound together into one perfect flower head? How many petals do you think one flower can hold?

# Snapdragon

These hardy flowers grow wild across rocky areas of North America, Asia, Europe, and Northern Africa. The flowers bloom starting from the bottom of the stem to the top. Once they have all bloomed, they make a magnificent display! Snapdragons come in just about every color imaginable.

#### ( ∍ Flower Study < )

Snapdragons are named for their resemblance to the mythical creature. Next time you come across a snapdragon, reach out and pinch the flower gently on each side with your thumb and forefinger; the "mouth" will open with each squeeze!

Type: Annual or Perennial
Scientific Name:
Antirrhinum spp.
Family: Plantaginaceae
Native to: Europe, North
Africa, and North America







details and learn the names of some everyday and unusual flowers.





Zinnia



Lavandula



Antirrhinum



Castilleja

