

Ynés Mexía:

Mexican-American Botanist and Trailblazer

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Ynés Mexía was a fearless botanist who traveled to some of the most remote regions in North and South America and collected over 140,000 specimens, including a new genus of Asteraceae.

Ynés Enriquetta Julietta Mexía was born in 1870 in Washington, D.C., the daughter of a Mexican diplomat and granddaughter of a prominent Mexican general (Bracelin, 1938) (Figure 1). Little is known about her early childhood except that she moved frequently, spending her earlier years in Texas and later moving to private schools in Philadelphia and Ontario. She was described as a shy child but enjoyed reading, writing, and spending time outdoors (Anema, 2019; Unladylike2020).

As a young adult, Mexía moved to Mexico to take care of her dying father and help manage the family ranch after he passed away. This period in Mexía's life was marked by many challenges. She married twice; she was widowed shortly after her first marriage and her second marriage ended in divorce after her husband bankrupted the ranch. By her late 30s, Mexía was seriously suffering with her mental health and experiencing mental and physical breakdowns.

In 1909, Mexía moved to San Francisco seeking a fresh start and medical treatment. While recovering in California, she discovered her passion for the



Figure 1. Portrait of Ynés Mexía. Illustration by Dr. Emily Strange.

natural world. Mexía became an early and devoted member of the Sierra Club and Save the Redwoods League, two environmental organizations that were instrumental in fighting for the protection and preservation of nature in the 20th century. She was outspoken about the formation of national parks and efforts to protect the Northern California Redwoods (*Sequoia sempervirens* Endl., CUPRESSACEAE):

I have been much distressed to hear cutting has been going on in Montgomery Grove, I am heartily in sympathy of any effort to save these trees.

Ynés Mexía (Anema, 2019)

Through excursions with the Sierra Club, Mexía traveled across the state hiking and camping in the mountains around Yosemite in the Sierra Nevada and the temperate rainforests of Northern California. These experiences inspired her to return to her studies.

In 1921, Mexía enrolled in an undergraduate program at the University of California, Berkeley. And remarkably, at the age of 51, Mexía began her career in botany. During her studies, she learned how to identify and collect plants, work she described as giving purpose to her life (Unladylike2020). And in 1925, Mexía embarked on her first major field expedition to western Mexico with a group from Stanford University lead by Roxana S. Ferris, assistant curator of the Dudley Herbarium. On that trip, Mexía realized she could accomplish more on her own, so she broke off from the group and proceeded to collect 3,500 specimens from 500 species before returning to California.

For the next thirteen years, Mexía traveled across North and South America becoming one of the most prolific and renowned collectors of her time. As her reputation grew, she was sponsored to lead her own expeditions to some of the most remote regions of the Americas. In 1928, she traveled up to Alaska and made the first general collections in what would become Denali National Park. Between 1929 and 1932, she traveled 4,800 km up the Amazon via steamboat and dugout canoe, following the river to

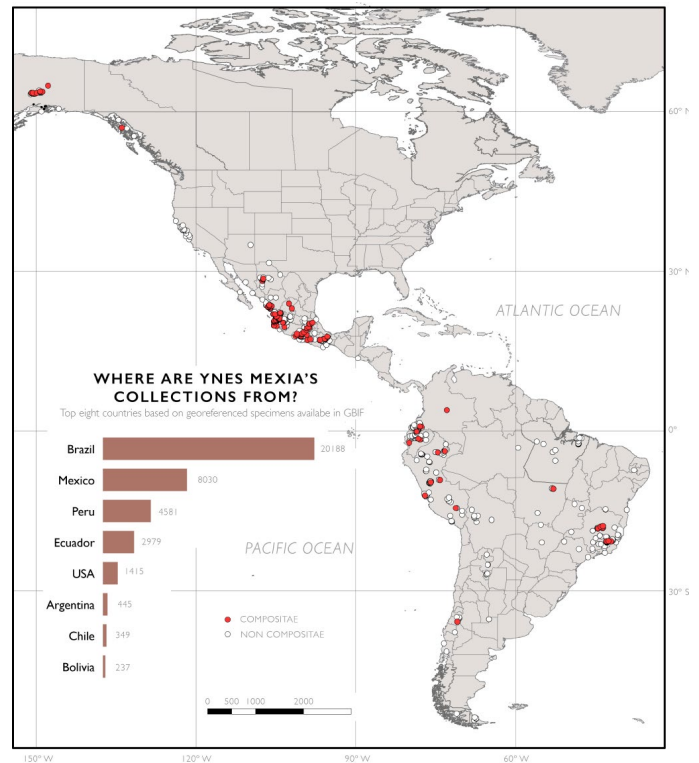


Figure 2. Map of Ynés Mexía's collections across North and South America. Note: map only displays the 7,777 georeferenced occurrence records digitally available of her 140,000+ specimens. Data sources: Bionomia and GBIF.

its source in the Andes mountains (Mexia, 1933). On this major achievement, she crossed South America at its widest point and collected 65,000 specimens in a period of two and a half years.

Over her short career in botany, Mexía traveled from the northern reaches of the Americas down to the southern tip at Tierra del Fuego making stops in

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.

Ynés Mexía (1933)

Alaska, Mexico, Brazil, Peru, Ecuador, Bolivia, Chile, and Argentina (Figure 2), all the while challenging the conventions of what women were capable of in botany at the time.

While Mexía was a skilled generalist collector with a keen eye for new species, through her collections and writing she showed a strong interest in Asteraceae and made significant contributions to research on the family (Mexia, 1929; Bionomia, 2021). Most notably, while doing fieldwork in western Mexico near Puerto Vallarta, she collected a specimen that was later described as a new genus: *Mexianthus mexicanus* B.L.Rob (Figure 3). This specimen was sent for determination among a number of Eupatoriums to Dr. B. L. Robinson, of the Gray Herbarium, Harvard. In addition to a new genus of Asteraceae, Mexía also collected numerous new species: *Acourtia mexiae* L.Cabrera (Figure 4A), *Hofmeisteria mexiae* (B.L.Rob.) B.L.Turner, *Verbesina pantoptera* S.F.Blake, *Verbesina mexiae* B.L.Turner, and many more. However, it was not only new species

It might seem appropriate that in this most remote and hidden nook of this out-of-the-way corner of the world, that I should have collected among other composites one that has turned out to represent a new genus. On December 1, 1926, my mozo, Reyes, and I followed the little river some distance and took a trail that wound up the steep forested volcanic mountains that here pitch directly down to the ocean. After climbing for two or three miles we came to a small stream, “El Arroyo del Chorillo”, named thus from a little waterfall higher up, and working down this stream a bit collected this plant among others along the sandy streambed. It grows to about a meter in height, is suffrutescent to woody below and has small globular heads of white flowers.

Ynés Mexía (1929)

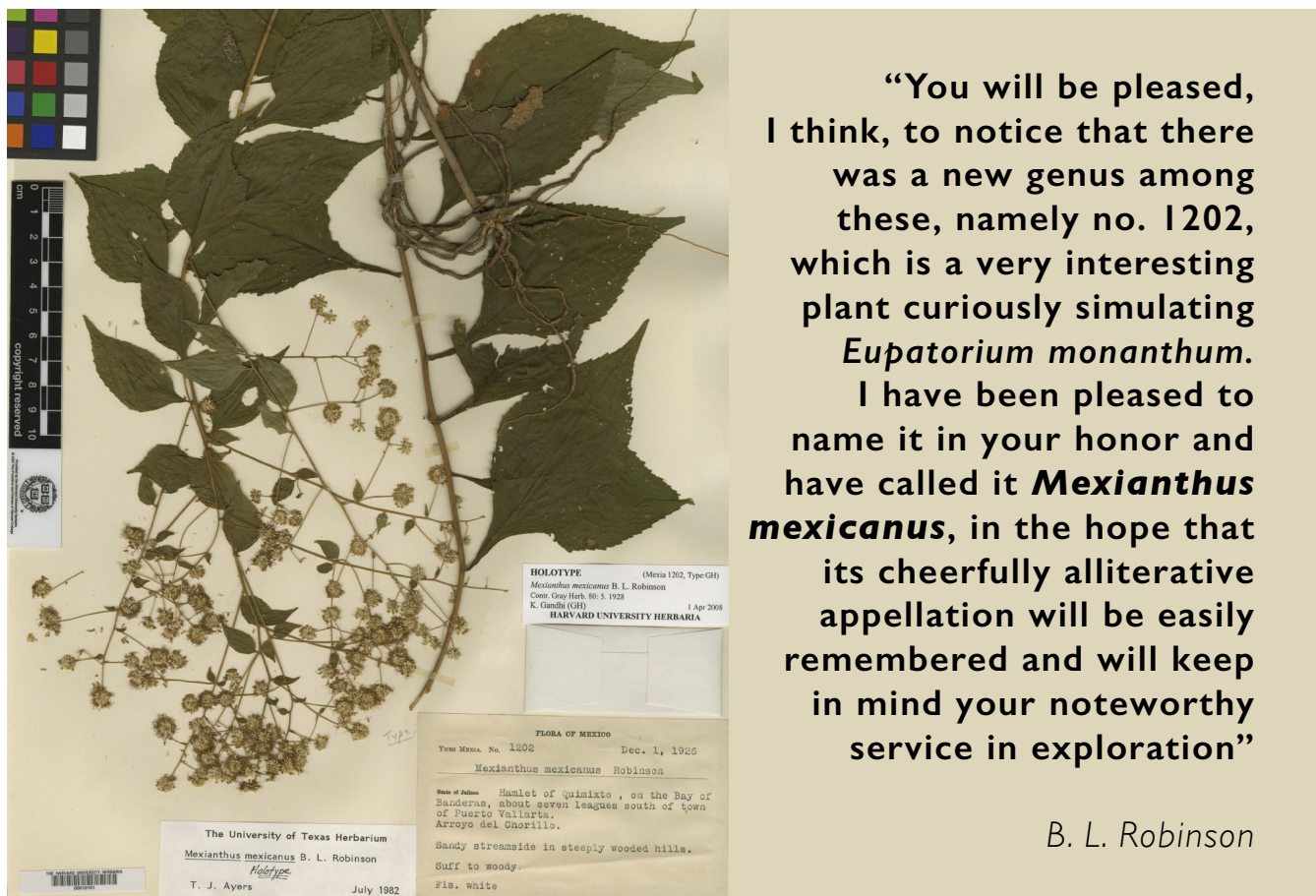


Figure 3. New genus of Asteraceae collected by Mexía: *Mexianthus mexicanus* B.L.Rob. Specimen image courtesy of Gray Herbarium of Harvard University.

“I don’t think there’s
any place in the world
where a woman can’t
venture alone.
In all my travels I’ve
never been attacked
by wild animals, lost
my way or caught a
disease.”

Ynes Mexia,
The San Francisco News, 1937



Figure 4. Specimens collected by Ynés Mexía. **A.** *Acourtia mexiae* L. Cabrera. **B.** *Espeletia pycnophylla* subsp. *angelensis* Cuatrec. Specimen images courtesy of **A**, Herbarium of Arnold Arboretum of Harvard University; **B**, United States National Herbarium (US).

of Asteraceae that caught Mexía’s attention. While on an expedition in Ecuador searching for the wax palm (*Ceroxylon ventricosum* Burret), she had a memorable first encounter with *Espeletia* Bonpl., also known as Frailejones (Mexia, 1937). One night of the expedition, Mexía and her guides had to make camp on the páramo near Volcán Chiles. The ground of the campsite was boggy and wet, with constant cold rain coming down. The team quickly built a make-shift camp and windbreak out of Frailejones leaves. The next morning they carried on with the expedition, but not before making an *Espeletia* collection (Figure 4B). Even in the face of challenging conditions, Mexía always showed great resilience and joy in fieldwork.

By the end of her career, Mexía had collected over 140,000 specimens, which contributed to more than 500 newly described species. Today, at least 50 species are named in her honor. She was a fierce conservationist and made many contributions to the early environmental movement in the US. Mexía’s legacy extends beyond her immense contributions to botanical research and conservation. She thrived as a woman in science even after struggling with her mental health and overcoming several personal tragedies. What’s more, her illustrious career as a botanist began in her fifties. Mexía defied society’s expectations, blazing a trail for diverse future generations of botanists.

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