



2024. A collage illustrating the globalization of the Mexican plant, 'cempasúchil'. From top to bottom: petals in a yogurt and fruit dessert in Taiwan, plastic decoration for religious rituals in Thailand, and ritual ornament for the Day of the Dead in Mexico. Photograph by Michael Heinrich © Michael Heinrich

## What is a Flower? ('cempasúchil')

The image that illustrates this piece is a visual metaphor of human interaction with plants, reflecting how they cross cultural and geographical boundaries, always surrounded by our humanity. It invites reflection on anthropocentrism and globalization. What is a flower? Petals in a yogurt dessert in Taiwan, plastic decoration for religious rituals in Thailand, or a ritual ornament for the Day of the Dead in Mexico; a flower with a fragrant aroma, a natural dye for the poultry and shrimp industries, or a storage rich in carotenoids useful for managing and preventing eye diseases: *cempasúchil*, a flower that mirrors our human existence.

What is a flower? Hegel, in his *Phenomenology of Spirit*, proposes that «the perception of an object implies a conceptual structure, a dialectical relationship between the perceiving subject and the perceived object.» A flower is what we are: disease (a medicinal remedy), nutrition (a dietary supplement), creativity (horticulture and gardening), curiosity (an object of scientific research), economy (a means of trade), culture, rituals, or simply a pretty color in a dessert for aesthetics or a piece of plastic on a shelf.

*Cempasúchil* is a Mexican endemic plant scientifically known as *Tagetes erecta* L., with its earliest records and origins in Mesoamerica—a cultural region that encompassed much of present-day Mexico and Central America. This plant has been an integral part of the traditions and rituals of various pre-Hispanic civilizations. Its name comes from Nahuatl, a living indigenous language that gives the plant a deep cultural and symbolic significance. The name comprises two words: *cempohual-li*, meaning twenty, and *xochi-tl*, meaning flower. The number twenty holds a cosmological significance attributed to the vigesimal system of the Mayan calendar, the lunar cycle, among other rituals. For instance, *cempasúchil* was considered a reincarnation of the god Tlaloc (the rain god in Tenochtitlán) and was used to treat ailments attributed to this god through various rituals. Historical records establish the importance of this flower in medical, magical, and religious practices, with its contemporary use during the Day of the Dead in Mexico representing a continuation of a cultural heritage.

In Europe, after the conquest, this plant, like many others, became the subject of debates to determine its name, origin, and uses. Under Latin nomenclature, it received several names: *Tagetes*, *Othona*, *Tanacetum*, or *Caryophylla*; its origin was theorized to be in France, Germany, and even Africa and India. Regarding its uses, it was suggested it had mainly ornamental and medicinal applications for managing urinary and digestive issues (some authors even described its toxicity and dangers if ingested by household pets). This discussion persisted until the mass standardization carried out by Linnaeus in his work *Species Plantarum* (published in 1753), which established its origin in Mexico and the plant's name using the well-known binomial system. This system, while facilitating the identification and study of plants, has also stripped species of their cultural and symbolic individuality (Alexander von Humboldt criticized how Linnaeus' system reduced the diversity and richness of plants to mere scientific labels).

Today, *cempasúchil* has become an object of interest in various human fields: in forgotten pre-Hispanic history as a plant of Tlaloc (the rain god); in ethnobotany as a treatment for digestive and urinary problems; in pharmacology for its antioxidant and anti-inflammatory properties; and from a phytochemical perspective, as a source of carotenoids, especially lutein. Clinical studies have demonstrated lutein's efficacy in the prevention and treatment of eye diseases. In the industry, it is used as feed for poultry and in dietary supplements for visual health. The extraction of lutein has displaced the «traditional» uses of *cempasúchil*, significantly positioning it in the global market for botanical extracts, valued at 2.2 billion dollars in 2021, with a projected growth of 5.4% between 2021 and 2026.

Our collage for this piece invites reflection on anthropocentrism, plants, and globalization. What are we making of flowers? Should a flower be useful? Is a flower tradition? Are the petals of a flower used to color desserts? Is a flower a symbolic representation made of plastic? Is a flower a ritual? Is a flower a country? Is *cempasúchil* versatile, or are we humans, the versatile ones? What is *cempasúchil* if not a reflection of ourselves, a reflection of the human?

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## Further Reading

López-Estrada D, Chang W-T, Heinrich M. 2024. [From “traditional” to modern medicine: A medical and historical analysis of \*Tagetes erecta\* L. \(Cempasúchil\)](#). *Journal of Traditional and Complementary Medicine*.