

The first flower to appear along the path of plant evolution, during the time of the dinosaurs, was a hermaphrodite with petal-like organs arranged in [concentric circles](#), according to researchers.

The bloom had both male and female reproductive organs at the centre, surrounded by multiple layers or "whorls" of petal-like parts called tepals, arranged in sets of three per layer, they wrote in the journal *Nature Communications*.

The reconstruction, based on the largest dataset of flower traits ever assembled -- from 792 existing species -- challenges scientific assumptions that the ancestral flower would have had its sex organs and "petals" arranged in a spiral.

Most flowers today have four "whorls" -- the outer leaves or sepals, followed by the petals, which enclose the male organs called stamens, with the female organs or carpels at the centre.

The ancestral flower likely did not have separate sepals and petals, instead sporting tepals -- a mix between the two -- around the sex organs at the centre.

Modern flowers with tepals rather than petals include tulips and lilies.

"The results are really exciting," said Maria von Balthazar, a floral morphology expert at the University of Vienna, who took part in the research.

"This is the first time that we have a clear vision for the early evolution of flowers across all angiosperms" -- the scientific term for flowering plants.