

Churchill's search for ET

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Between ruling Britain and helping the Allies win World War II, Winston Churchill was among the first to theorise about other regions of the Universe in which conditions may be conducive to harbouring life, it has been revealed

War correspondent, statesman, astronomer. Stargazing may not be what Winston Churchill is best remembered for, but a treatise he wrote on extraterrestrial life has revealed his scientific acumen six decades later.

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British Bulldog was among the first to theorise about other regions of the Universe in which conditions may be conducive to harbouring life, it has been revealed.

Excerpts from his essay "Are We Alone in the Universe?" were brought to light Wednesday in the science journal *Nature*.

"I am not sufficiently conceited to think that my sun is the only one with a family of [planets](#)," Churchill wrote in the document which astrophysicist Mario Livio laid hands upon last year at the US National Churchill Museum in Fulton, Missouri.

There must be many other planets, he concluded, of "the right size to keep... water and possibly an atmosphere", and "at the proper distance from their parent sun to maintain a suitable temperature."

This later became known as a star's "habitable zone".

To qualify, a planet has to orbit its star at a distance far enough so that water does not evaporate in the solar heat, and near enough that it does not freeze beyond the rays' reach.

Water is considered an essential requirement for life, however primitive.

Churchill first drafted the paper in 1939, when Europe was on the brink of war, and revised it in the late 1950s while visiting his publisher in a village in the south of France, said Livio.

As far as could be determined, the work has never been published or subjected to scientific or academic scrutiny.

"What is extraordinary is his train of thought, he thinks about the problem like a scientist," Livio told AFP of the find.

'Goldilocks' zone

The concept of [habitable zones](#) originated in the 1950s, the same decade in which Churchill finished his essay.

A war correspondent and soldier turned politician, Churchill was also known for his love of science.

He wrote essays and articles in the 1920s and 1930s on topics including evolution, cell biology and fusion power.

Later as a politician, he regularly consulted scientists and was the first British prime minister to employ a science adviser, according to Livio.

The government under Churchill funded laboratories, telescopes and technology development that spawned many discoveries.

Until now, astrophysics was not known to have been one of his fields of scientific interest.

"At a time when a number of today's politicians shun science, I find it moving to recall a leader who engaged with it so profoundly," Livio wrote in Nature.

The hunt for potentially habitable planets elsewhere in the Universe began decades after Churchill's musings on the topic.

In 2015, researchers calculated that our Milky Way galaxy alone may be home to billions of planets orbiting in their host stars' so-called "Goldilocks" zone.

The Paris-based Extrasolar Planets Encyclopaedia has so far compiled a database of over 3,500 planets around other stars, a few dozen in the

habitable sweet spot.

More information: Mario Livio. Winston Churchill's essay on alien life found, *Nature* (2017). [DOI: 10.1038/542289a](https://doi.org/10.1038/542289a)

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