

# Mother of cultivated rice came from China's Pearl River

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This general view shows the Pearl River in the centre of Guangzhou, in 2001. The mother of all cultivated rice was grown on China's Pearl River, according to a DNA "map" published.

The mother of all cultivated rice was grown on China's Pearl River, according to a DNA "map" published on Wednesday

The first domesticated strain of rice was *Oryza sativa japonica*, which was grown thousands of years ago from wild rice in the middle of the [Pearl River](#) in [southern China](#), says the study, published in *Nature*.

One of the "Big Three" crops that feed the world along with wheat and corn, rice today has diverged into hundreds of varieties.

The origins of this important food have spurred long scientific debate.

Researchers have wrangled over where and when the first domesticated variety was grown. Some in fact have argued domestication was a multiple event in which two rival strains emerged at the same time.

[Cultivated rice](#) divides into two major sub-species—*Oryza sativa japonica*, which is short-grained and glutinous, and *Oryza sativa indica*, which is long-grained and non-sticky.

Researchers led by Bin Han of Shanghai Institute for Biological Sciences put together a gigantic database to compare tiny single-letter changes in rice DNA.

Their trawl covered 446 geographically diverse types of wild rice (*Oryza rufipogon*)—the ancestral [progenitor](#) of commercially farmed rice—and 1,083 varieties of *japonica* and *indica*.

By putting together a family tree, the researchers say they can disprove theories that *indica* rice was domesticated separately from wild rice.

Instead, the first *indica* was a cross between [japonica](#) and [wild rice](#).

This mix then spread into Southeast and South Asia, where farmers bred varieties to cope with local conditions, thus creating the distinctive *indica* group.

The genome comparison should be an important resource for plant breeders, helping them to pinpoint 55 genetic signatures that have entered the genome through human selection, say the authors.

The study in Nature did not put a precise date on domestication. However research published last year in the US journal Proceedings of the Academy of Sciences (PNAS) said the first rice was grown around 8,200 years ago, a date that tallies with archaeological evidence from China's Yangtze Valley.

**More information:** Paper: [DOI: 10.1038/nature11532](https://doi.org/10.1038/nature11532)

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