

Study finds golden algae responsible for killing millions of fish less toxic in sunlight

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A new Baylor University study has found that sunlight decreases the toxicity of golden algae, which kills millions of fish in the southern United States every year.

While golden algae is primarily a coastal species, it has been found in Texas rivers and lakes, including Lake Whitney and Lake Waco in Central Texas, and Lake Granbury in North Texas. Experts believe that several environmental factors influence toxin production, but new research from Baylor scientists shows that sunlight is a key component in the magnitude and duration of the toxicity of the algae to fish. Specifically, the study found that the longer golden algae toxins are exposed to natural sunlight, the less toxic the algal toxin becomes to fish and other [aquatic organisms](#).

"What we think happens in terms of the large fish kills is that [sunlight](#) only penetrates down so deep in a lake, so in a lake with golden algae blooms, fish located at greater depths may be exposed to more algal toxins," said study co-author Dr. Bryan Brooks, associate professor of environmental sciences and biomedical studies at Baylor and director of the [environmental health sciences](#) program. "Golden algae is aggressive and very unique because it can produce its own toxins, swim, photosynthesize and feed on other organisms. If we can figure out what stimulates and decreases the growth of this algae, we might be able to control it."

Along the Brazos River in north and central Texas, at least seven-million

fish have been killed since 1988 due to high golden algae levels, according to Texas Parks and Wildlife. In fact, in 2005 more than a million [fish](#) died in [Lake](#) Whitney over a three-month period. Officials believe large golden [algae blooms](#) contributed to the deaths, attacking the fishes' gills and causing them to suffocate.

The study appears on-line in the *Journal of Plankton Research*.

Provided by Baylor University

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