

《春天提早到来了，但这是个坏消息》

Across much of the United States, a warming climate has advanced the arrival of spring. This year is no exception. In parts of the Southeast, spring has arrived weeks earlier than normal and may turn out to be the warmest spring on record.

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Apple blossoms in March and an earlier start to picnic season may seem harmless and even welcome. But the early arrival of springtime warmth has many downsides for the natural world and for humans.

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Rising temperatures in the springtime signal plants and animals to come alive. Across the United States and worldwide, climate change is steadily disrupting the arrival and interactions of leaf buds, cherry blossoms, insects and more.

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Records managed by the USA National Phenology Network and other organizations prove that spring has accelerated over the long term. For example, the common yellow trout lily blooms nearly a week earlier in the Appalachian Mountain region than it did 100 years ago.

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Blueberries in Massachusetts flower three to four weeks earlier than in the mid-1800s. And over a recent 12-year period, over half of 48 migratory bird species studied arrived at their breeding grounds up to nine days earlier than previously.

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Warmer spring temperatures have also led beetles, moths and butterflies to emerge earlier than in recent years. Similarly, hibernating species like frogs and bears emerge from hibernation earlier in warm springs.

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All species don't respond to warming the same way. When species that depend on one another - such as pollinating insects and plants seeking pollination - don't respond similarly to changing conditions, populations suffer.

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