First report of leaf spot disease on sugarcane caused by *Bipolaris spicifera* in China

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Typical symptom in field

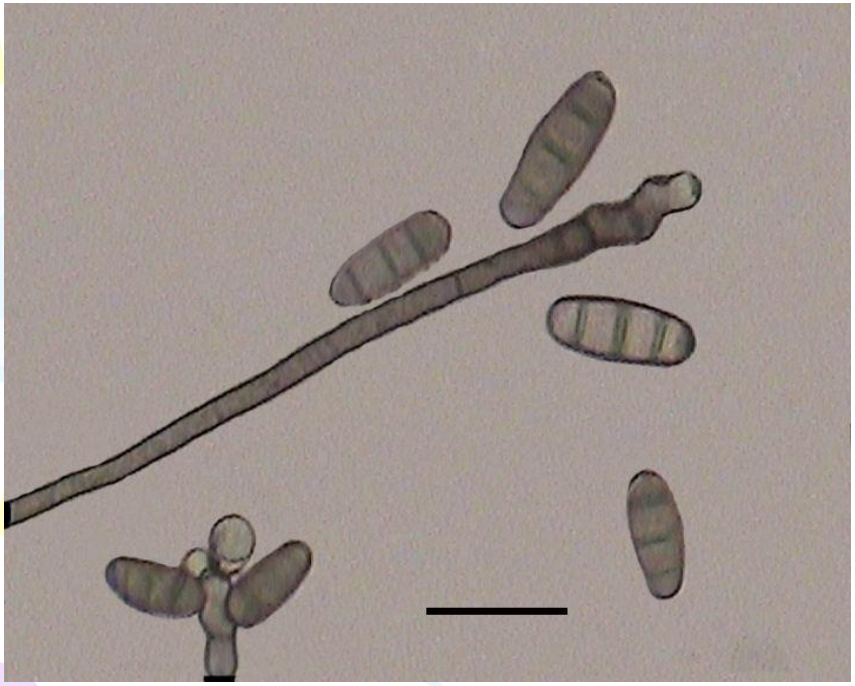


The primary symptoms

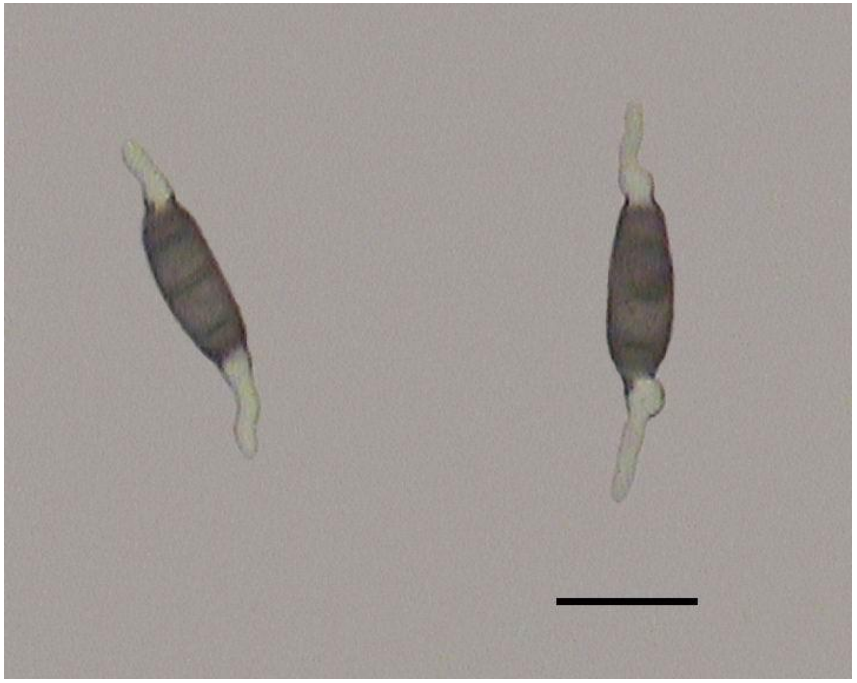


Typical symptoms

Causal agent



Conidia and conidiophore of *Bipolaris spicifera*

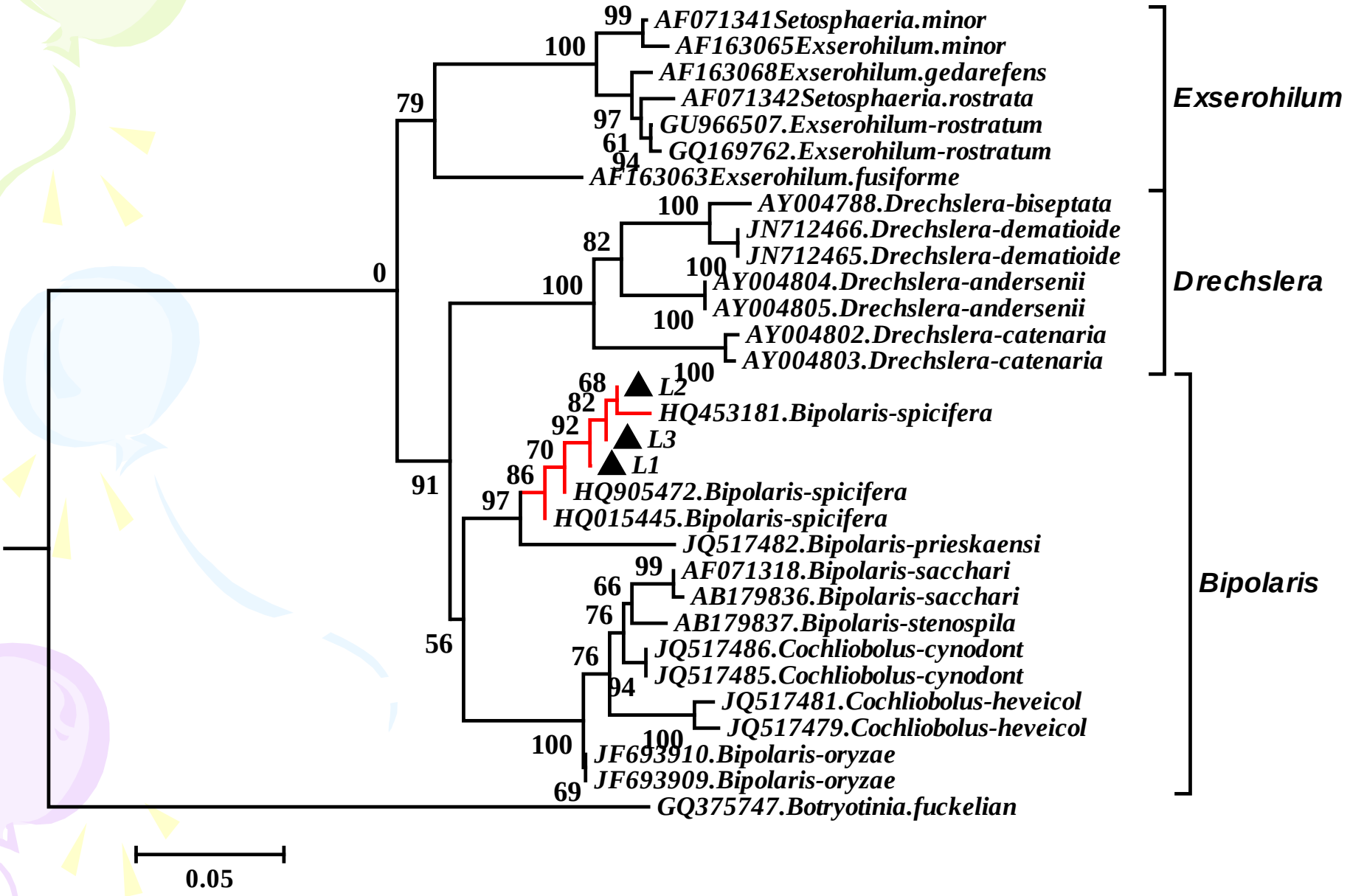


Bipolar-germinating conidia

Molecular identification

- Total genomic were extracted with CTAB method
- Primers: universal primers (ITS1 & ITS4)
- The nucleotide sequences of the isolates shared 99-100% maximal identity with those of *Bipolaris spicifera* in GenBank database.

Phylogenic analysis



Bipolaris spp. occurred on sugarcane leaf

- *Bipolaris sacchari* (Eye spot)
- *Bipolaris stenospila* (Brown stripe)
- *Bipolaris hawaiiensis* (Foliage blights)

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Seedling blight of sugarcane — A new disease caused by *Drechslera* state of *Cochliobolus spicifer*

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First report of leaf spot disease on sugarcane caused by *Bipolaris spicifera* in China

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Abstract A new leaf spot disease of sugarcane caused by *Bipolaris spicifera* was found for the first time at Luoman town of Liuzhou city, Guangxi Zhuang Autonomous Region, China in 2011. Three pathogenic isolates were obtained and their pathogenicity was confirmed respectively. The pathogenic isolates were identified as *B. spicifera* based on conidial morphology and rDNA-ITS (internal transcribed spacer) sequences comparison. This is the first report of *B. spicifera* causing leaf spot on sugarcane in China.

Keywords Sugarcane · Leaf spot disease · Bipolaris spicifera

China is the 3rd largest sugarcane (*Saccharum officinarum* L.) producing country following Brazil and India. For the climatic conditions, major sugarcane producing areas distribute in the south of China, including Guangxi, Yunnan, Guangdong, Hainan and Fujian provinces. Approximately 60% of the total cane yield is produced in Guangxi (Li 2005). Diseases are considered to be the most severe threat to sugarcane production in Guangxi, especially smut, ratoon stunting and viral diseases. Recently, a new leaf spot disease was found on sugarcane in a field at Luoman town of Liuzhou city, Guangxi province in 2011.

The symptoms on sugarcane cultivar GT 21 firstly appeared as a small brown-red water-soaked spot (Fig. 1). Subsequently the diseased areas turned into a black/brown


Thank you
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