COMUNICAÇÕES

Toona ciliata, a new host of *Cylindrocladium clavatum* in Brazil

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Australian red cedar plants (*Toona ciliata* var. *australis*) grown in Piatã, in the region of Chapada Diamantina, Bahia State, Brazil, have been affected by a rot that attacks the plant root collar and roots. The symptoms begin in the plant basal region, causing darkened lesions which will later rot the bark and roots (Fig. 1A). These lesions will evolve to what is called trunk annealing which, in association with the root rot, may cause the plant death. Generalized leaf yellowing can be observed in the canopy, causing the leaves to dry. This disease occurs more frequently in the drier periods of the year and has caused the death of approximately 10 % of the planted area; as a consequence, it might render cedar cultivation unviable in that region.

Root samples were collected and microscopic examinations revealed the presence of a whitish fungal mycelium containing conidiophores and long conidia, which were isolated in potato dextrose agar (PDA) culture medium and identified as belonging to the genus *Cylindrocladium*. To determine the species, small fragments of the PDA medium containing fungal structures were plated onto Petri dishes containing clove leaf-agar medium (CLA) and incubated for fifteen

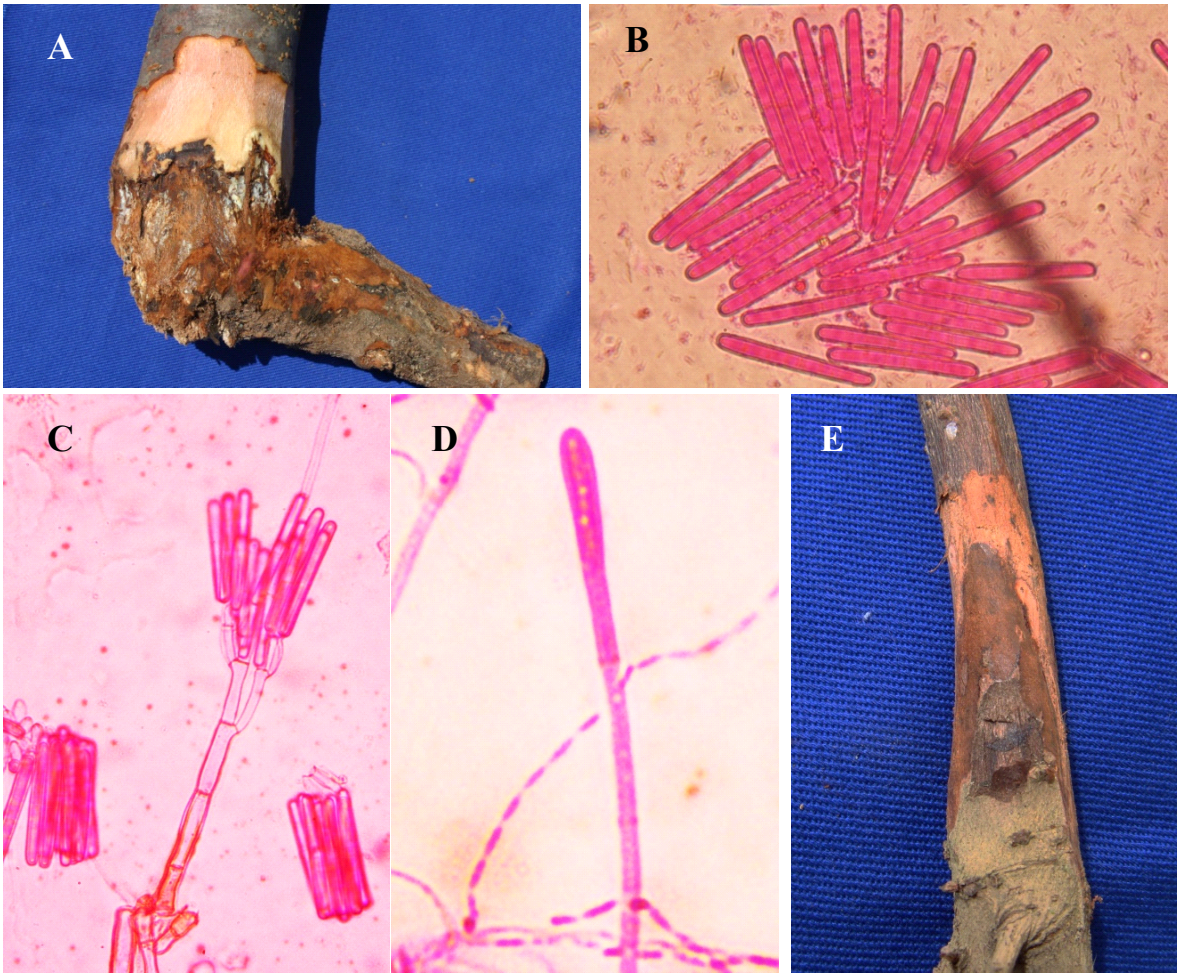

Figure 1. *Cylindrocladium clavatum*. Collar and root rot on *Toona ciliata* (A); conidia (B), conidiophore (C), vesicle (D) and pathogenicity test (E).

days at 25ºC and a 12-hour photoperiod (light/dark) for sporulation to occur. The species was identified using Crous & Wingfield's classification key (Crous, P.W.; Wingfield, M.J. Mycotaxon, v.51, p.341-435, 1994), based on measurements of stipes, vesicles, phialides and conidia, as *Cylindrocladium clavatum* Hodges & May. Only the material that grew on the CLA medium was examined.

A pathogenicity test was conducted for six-month-old Australian red cedar seedlings. A longitudinal incision was made on the seedling stem, at the root collar region, and a PDA disk (0.5 cm diameter) colonized with the fungus was inserted into the incision. PDA disks without the fungus were also inoculated into healthy plants, which served as controls. The inoculated region was covered with parafilm and evaluations were carried out at 90 days after inoculation.

The cultures in CLA had conidiophores with septate, hyaline stipes, 162-190 µm in length (Fig. 1C), with a clubbed vesicle at the tip, measuring 3-5 µm diameter (Fig. 1D). Phialides were doliform to reniform, hyaline, non-septate, measuring 9-14 x 3-5 µm. Cylindrical, hyaline, 1-septate conidia, round at both ends, were also observed, measuring 34-42 x 4-5 µm (Fig. 1B).

Some darkening of the plant root collar tissues spreading from the inoculation site was observed in the pathogenicity test (Fig. 1E); this symptom was not observed in plants used as controls.

Based on the results of the pathogenicity test, the fungus *Cylindrocladium clavatum* was considered the causal agent of the disease.

In Brazil, the association between *C. clavatum* and various species of plants was demonstrated (Rehn et al. Brazilian Journal of Microbiology, v.35, p.292-294, 2004). However, this seems to be the first report of *Cylindrocladium clavatum* on Australian red cedar in Brazil.