# Occurrence of *Phyllachora balansae* in *Toona ciliata* in Southern Minas Gerais State, Brazil

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The fungus *Phyllachora balansae* Speg. has been reported to cause defoliation and even the death of small *Cedrela fissilis* and *C. odorata* trees in Puerto Rico and in tropical America (Alvarez-Garcia, L.A. A Cedar seedling blight in Puerto Rico. Caribbean Forester, v.1, n.2, p.26, 1940). In May 2009, in the regions of Campo Belo, Perdões and Lavras, Southern Minas Gerais State, Brazil, seedlings and adults of Australian cedar (*Toona ciliata*) were noted to show black fruiting bodies in circular areas. At first, they appeared as minute discolored specks that grow and become yellow and brown distributed throughout the adaxial side of leaflets and petioles (Figure 1A, B and C) in the adult plant (Figure 1D) and on cedar bark (Figure 1E). Heavily infected seedlings shed their leaves and eventually die. Isolation of the causal agent from leaves showing typical symptoms was done by disinfecting small leaf fragments with 70% alcohol and 2% sodium hypochlorite, followed by transference to Petri dishes containing PDA culture medium. Five days after incubation at 25ºC, fungal colonies were observed; they spent 15 days each to reach the edge of the dishes (Figure 1G). Thirty days after incubation, there was formation of protoperithecia, which have no fertile structures inside. Pathogenicity was determined by growing five strains (UFLA01, UFLA02, UFLA03, UFLA04, and UFLA05) on PDA medium at 25ºC for 30 days. Koch postulates were adopted by placing nine-mm culture discs on healthy leaves of Australian cedar seedlings without injury (Figure 1H). Control plants were inoculated with PDA medium discs without fungal culture. After inoculation, plants were incubated at 25±2°C for 15 days. Inoculated plants showed lesions similar to those observed in the field and the recovered colonies were similar to the inoculated colony (Figure 1I). Ascospores produced in the lesions were hyaline, spherical to elliptical, measuring 10-12 x 7-9 µm. Based on these characteristics and on the literature (Chardon, C.E.; Miller, J.H.; Miller, A.S. Ascomycetes from the state of Minas Geraes (Brazil). Mycologia, v.32, n.2, p.172-204, 1940), the fungus isolated from *Toona ciliata* plants is *Phyllachora balansae* (Figure 1F and J). The presence of *Phyllachora balansae* in *Toona ciliata* was already reported (Ferreira, F.A. Patologia Florestal: Principais doenças florestais no Brasil. Viçosa, MG: Sociedade de Investigações Florestais/UFV, 1989. 570p). However, this is apparently the first report of isolation, cultivation on culture medium and pathogenicity confirmed for cedar seedlings in Brazil.

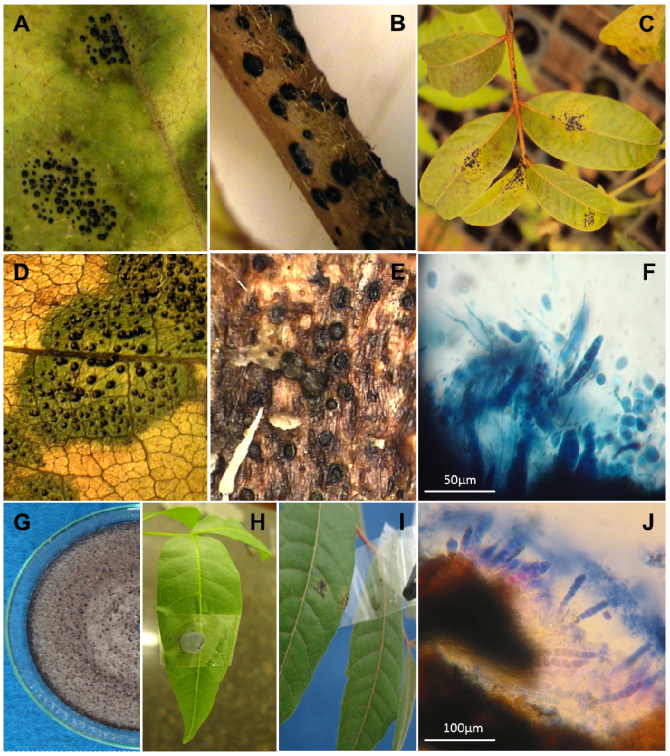


**Figure 1**. Symptoms on *Toona ciliata* plants caused by *Phyllachora balansae* in Australian cedar seedlings (**A**, **B**, **C**), adult plant (**D**) and bark (**E**). Ascospores of *P. balansae* in cedar seedlings that were naturally infected (**F**) and artificially infected (**J**). Fungal colony on PDA medium presenting protoperithecia (**G**). Inoculation by disc method (**H**), and symptoms at 15 days after inoculation (**I**). (Photo credit: Ana B. Zacaroni and Thaís O. F. Mansur).

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