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(Short Communication)

On the isolates of *Pleurothecium recurvatum* (Morgan) Hohnel from Taiwan

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Abstract. Two types of conidiogenous apparatus on *Pleurothecium recurvatum* were described in this brief article. Isolates KK0714 and WL0710 produced only "helicoid cyme" type, and isolates WL0213 and WL0214 produced only densely dichotomous branching umbellate type conidiogenous apparatus.

Key words: Conidiogenous apparatus; *Pleurothecium recurvatum*; Taiwan.

Four isolates of an interesting hyphomycetous fungus were observed growing and fruiting on decaying wood, one was collected from a river bed at Kukuan (isolate KK0714) and the other three were collected at Wulai from a stream (isolates WL0213, WL0214 and WL0710). These fungal isolates grew slowly on laboratory media such as malt extract agar (MEA), potato dextrose agar (PDA) and corn meal agar (CMA) incubated at 28°C. Based on morphology and morphogenesis of conidiogenous apparatus and conidia, this fungus was identified as *Pleurothecium recurvatum* (Morgan) Hohnel, the only species of the genus *Pleurothecium*.

Colonies effuse, hairy, dark brown when aged. Mycelium immersed. Conidiophores macronematous, mononematous, straight or slightly curved, dark brown in the lower portion and pale brown in the upper portion, septate, up to 420 μ. Conidiogenous cells polyblastic, denticulate, denticles arranged as "helicoid cyme" in isolates KK0714 and WL0710, and dichotomous branching appeared as umbellate in isolates WL0213 and WL0214. Conidia short, stout, falcate, hyaline, 3-septate, slightly curved, and rounded at the ends, 19.5-31.2 $\times$ 4.0-11.0 μ. Goos (1969) thoroughly investigated this monospecies of the genus *Pleurothecium*. He especially emphasized the characteristic development of the "helicoid cyme" form conidiogenous apparatus of his isolates. In our materials isolates KK0714 and WL0710 produced "helicoid cyme" form of conidiogenous apparatus either on natural substrate (Fig. 2A) or on autoclaved corn section placed on Sach's medium (Fig. 2B). However, in the latter case the "helicoid cyme" was less extended than those observed on natural substrate. Isolates WL0213 and WL0214 produced no "helicoid cyme" type conidiogenous cells, instead they were somewhat umbellate or dichotomous branching teeth (denticles) (Fig. 1A, B, C). Conidiophores of these two isolates frequently showed indeterminate, recurring growth by pushing the conidiogenous apparatus and conidia aside and elongating to a certain length, with new conidiogenous cells and conidia produced (Fig. 2C). The renewed growth of conidiophores repeated once or twice (Fig. 2C). These second and third crops of conidia were usually smaller than those produced earlier. This feature of morphogenesis was only observed on the cultures grown on corn leaf section placed on Sach's medium in a Petri-plate sealed with parafilm which subsequently kept the moisture high inside. Based on the conidiogenous cell morphology produced on natural substrates and under laboratory conditions we realized that there existed 2 different forms in this fungus; one form represented by isolates KK0714 and WL0710, as the isolates reported by Goos, produced "helicoid cyme" conidiogenous cells, the other form represented

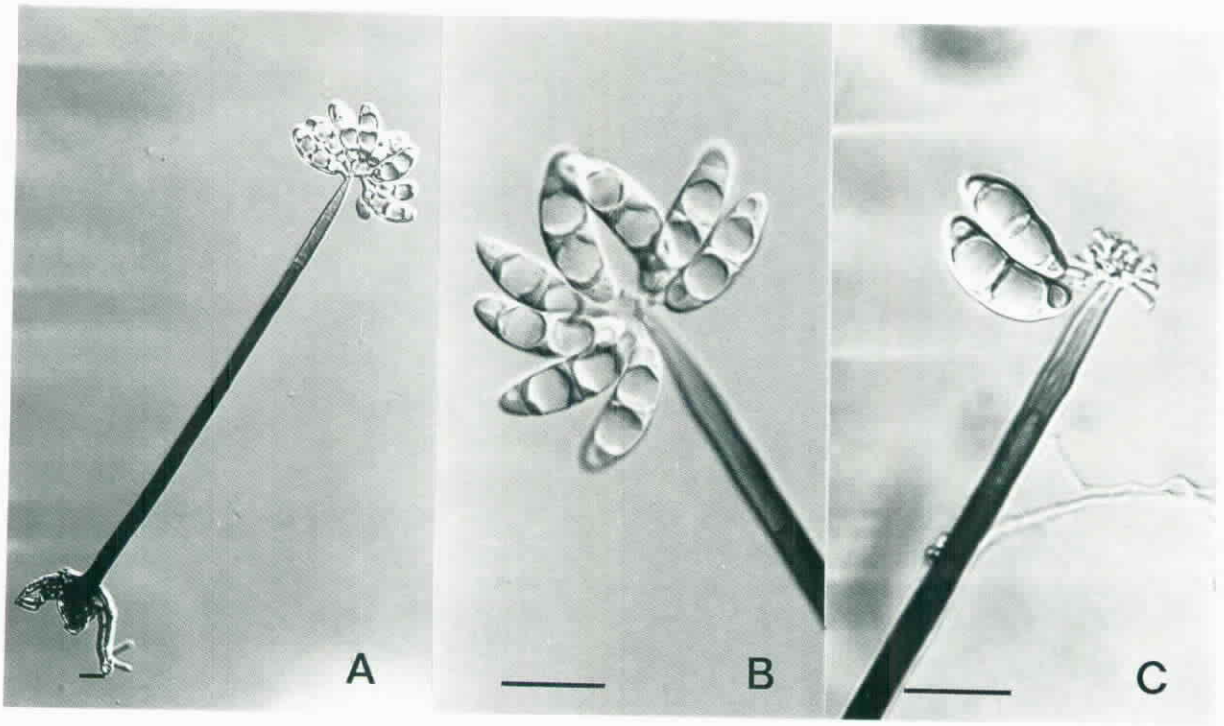

Fig. 1. *Pleurothecium recurvatum*, isolate WL0213, produced dichotomous branching umbellate type conidiogenous apparatus (A, B, C). Scale bar = 20 μ.

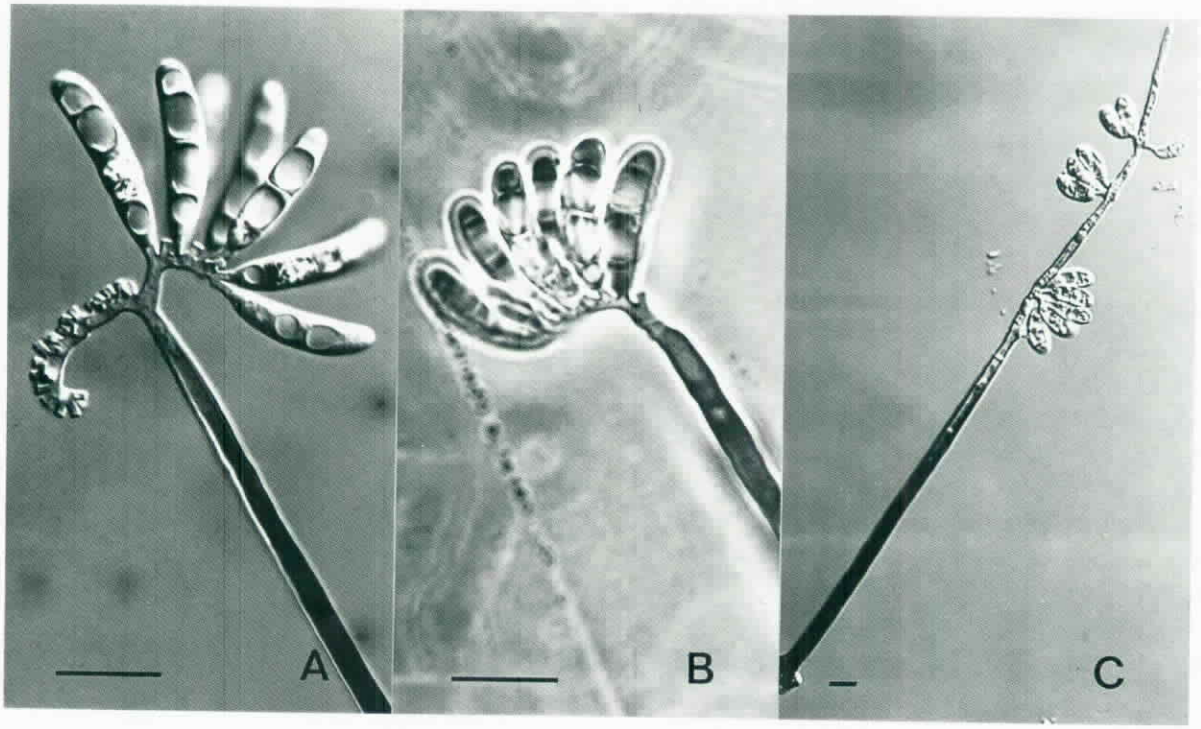

Fig. 2. *Pleurothecium recurvatum*, isolate KK0714 produced "helicoid cyme" type conidiogenous apparatus (A, B), fruiting structures formed under highly humid conditions (C, isolate WL0214). Scale bar = 20 μ.

Table 1. *Growth rate of* ***Pleurothecium recurvatum*** *on 3 different media**

Isolates	Diameter of colony (cm/week)		
	MEA	PDA	CMA
KK0714	2.4	1.8	1.9
WL0213	2.9	2.6	2.0
WL0214	2.9	2.2	2.3

*MEA: malt extract agar; PDA: potato dextrose agar; CMA: corn meal agar.

by isolates WL0213 and WL0214 produced somewhat umbellate type conidiogenous cells. Moreover, the length of conidiophores of isolate KK0714 were longer than those of WL0213 and WL0214, being 250-430 μm for the former and 160-290 μm for the latter. The growth rate of isolate KK0714 also differed from isolates WL0213, WL0214. The former isolate was slower than the latter isolates as shown in Table 1. Matsushima (1975) also described two types of conidiogenous apparatus from his materials collected at Nabari City, Mie, Japan.

Literature Cited

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台灣產 *Pleurothecium recurvatum* 之菌株

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本文報告台灣產 *Pleurothecium recurvatum* 菌株。本菌分生孢子形成器之發生形態可分成兩型：谷關菌株 KK0714 及烏來菌株 WL0710 具曲卷聚繖花序形之分生孢子形成器；烏來之 WL0213 及 WL0214 之菌株，其分生孢子形成器均爲密集叉狀分枝叢狀。