

## A new species of *Codinaea*

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The genus *Codinaea*, erected by MAIRE (1937), to accommodate phialosporous fungi which have two setulate conidia, was validated only recently by HUGHES and KENDRICK (1968). They synonymized the genus *Menisporrella* of AGNIHOTRUDU (1962) and added 10 species from Japan. In the course of our studies on hyphomycetes of this region, we have come across an interesting species of this genus which is being described as a *C. pakhalensis* sp. nov. named after the place of collection.

### *Codinaea pakhalensis* REDDY and REDDY sp. nov.

Coloniae effusae, olivaceo-brunneae, mycelio e hyphis immersis, ramosis, septatis subhyalinis vel brunneis 15–20  $\mu\text{m}$  latis composito; setae erectae, rectae, crebrae, tunicis levibus, singulatim vel binae vel ternae ex nodis e cellulis hyphalibus compositis ortae, brunneae, crasse tunicatae, ad basim fusco-brunneae, apicem versus pallide brunneae vel subhyalinae, interdum duodecies septatae, cellulis longitudine variabilibus ad 225  $\mu\text{m}$  longae, super basim inflatam ad 4.5  $\mu\text{m}$  latae, plerumque in parte superiore paulum geniculatae ad polyphialidem proferentes. Conidiophora instar polyphialidum pedicellatum, erecta vel ascendente, apicem versus aliquantum vel valide geniculata vel verrucosa, haud ramosa, singulatim vel gregatim e nodis cum setarum basibus conjunctis orta, pallide brunnea vel subhyalina, nonnumquam sexies vel octies septata, ab basim 2.3–3.5  $\mu\text{m}$  lata, 75  $\mu\text{m}$  longa, ad apicem 2–3  $\mu\text{m}$  lata, primo e phialide simplici stipitata collarulo terminali praedita consistentia, mox punctum incrementale juxta apicem proferentia, apice novo in collarulum terminato, collarulo priore reddito laterali et subterminali, proliferationibus talibus ordine 3–6, polyphialide se producente vestigia collarulorum ornato, intus septata. Collarula juniora hyalina ad 3  $\mu\text{m}$  lata, ad 1.5–2.5  $\mu\text{m}$  alta, tunica basim versus comparate crassa, apicem versus tenuis, evanida. Phialosporae hyalinae, curvulae, continuae, haud symmetricae, 6.0–11  $\mu\text{m}$  longae, 1.75–2.0  $\mu\text{m}$  latae, fine utroque in setulam rectam vel curvulam 4.0–10.0  $\mu\text{m}$  longam desinente, lateribus convexis ad medium directis in fasciulis glutinosis hyalinis super polyphialides accumulatae. Habitat: In pakhal Forest, Warangal, India.

Typus: S. M. Reddy, 15-11-73, KUMH 97 (Bot. Dep., Kakatiya University, Warangal, India).

Colonies effuse, olivaceous brown, mycelium composed of immersed, branched, septate, subhyaline to brown, 15–20  $\mu\text{m}$  wide hyphae, setae erect, straight, crowded, smooth walled, arising singly or in groups of 2 or 3 from knots of hyphal cells (Fig. 1). They are brown

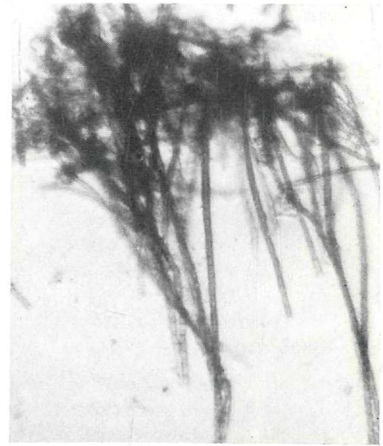
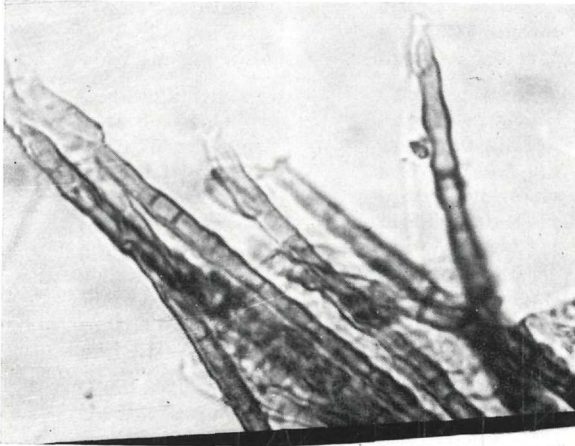
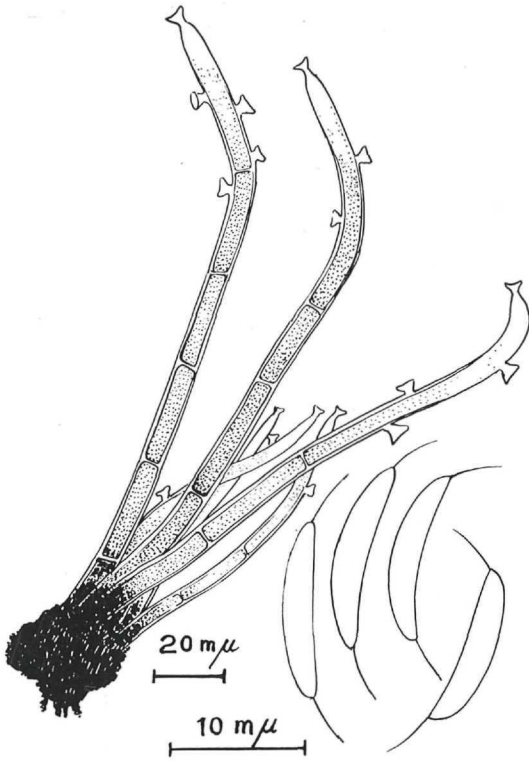


Fig. 1. Camera lucida drawings and photographs of conidiophores & conidia (phialospores) of *C. pakhalensis*

and thick walled, dark-brown at the base, pale-brown to subhyaline towards the apex upto 12-septate, cell length variable; they are upto 225  $\mu\text{m}$  long, upto 4.5  $\mu\text{m}$  wide just above the swollen base, usually slightly geniculate in the apical region which generally develops into a polyphialide. Conidiophores are stalked polyphialides; they are erect or ascending, slightly to markedly geniculate or warty towards the apex, unbranched, arising singly or in groups from the knots associated with the bases of setae, pale-brown to subhyaline, upto 6–8 septate, 2.3–3.5  $\mu\text{m}$  wide at the base, 75  $\mu\text{m}$  long and 2–3  $\mu\text{m}$  wide at the apex. At first they consist of a simple stalked phialide with a terminal collarette; subsequently a new growing point arises just below the apex, proliferation occurs when the growth of the new apex is terminated by the formation of a collarette, the original collarette now assuming a lateral and subterminal position; up to 3–6 successive proliferations are produced and the elongating polyphialide bears the persistent remains of the collarette while the internal septa are laid down. Newly formed collarettes are hyaline, proximally relatively thick walled distally thin walled and evanescent; they are upto 3  $\mu\text{m}$  wide upto 1.5–2.5  $\mu\text{m}$  deep. Phialospores hyaline, curved, non-septate, asymmetrical 6.0–11.0  $\mu\text{m}$  long and 1.75–2.0  $\mu\text{m}$  wide (Fig. 3), bearing at each end a simple, straight or gently curved setula

Table 1. Comparison of the present isolate with *C. assamica* and *C. fertilis*

<i>C. pakhalensis</i>	<i>C. assamica</i>	<i>C. fertilis</i>
Setae upto 12-septate upto 225 $\mu\text{m}$ long upto 4.5 $\mu\text{m}$ wide	Setae upto 17-septate upto 400 $\mu\text{m}$ long upto 7.8 $\mu\text{m}$ wide	Setae upto 17-septate upto 310 $\mu\text{m}$ long upto 5.6 $\mu\text{m}$ wide
Conidiophores upto 8-septate upto 75 $\mu\text{m}$ long upto 2.3 $\mu\text{m}$ wide 3–6 successive proliferations are produced collarettes funnel shaped upto 3.0 $\mu\text{m}$ wide and 1.5–2.2 $\mu\text{m}$ deep.	Conidiophores upto 8-septate upto 140 $\mu\text{m}$ long and upto 4.5 $\mu\text{m}$ wide upto 2-successive proliferations are produced collarettes are funnel shaped 3.8–4.2 $\mu\text{m}$ wide and 1.6–2.1 $\mu\text{m}$ deep.	Conidiophores upto 12-septate upto 112 $\mu\text{m}$ long upto 4.8 $\mu\text{m}$ wide upto 10 successive proliferations are produced collarettes are funnel shaped 2.8–4.2 $\mu\text{m}$ wide and 1.4–2.4 $\mu\text{m}$ deep
Phialospores hyaline, curved non-septate 6.0–11.0 $\mu\text{m}$ long 1.75–2.0 $\mu\text{m}$ wide setula 4.0–8.0 $\mu\text{m}$ long.	Phialospores hyaline, curved non-septate 14.6–16.8 $\mu\text{m}$ wide 2.6–2.8 $\mu\text{m}$ wide setula 9.6–12.8 $\mu\text{m}$ long.	Phialospores hyaline, curved non-septate 9–15.4 $\mu\text{m}$ long 2.0–3.0 $\mu\text{m}$ wide setula 5–10 $\mu\text{m}$ long.

4.0—10.0  $\mu\text{m}$  long, phialospores accumulate their convex faces facing the centre in slimy, colourless fascicles on the polyphialides.

Collected on unknown wood on 15-11-73 by S. M. REDDY from Pakhal forest, Warangal, A. P. India. Herbarium deposited in Botany Department, Kakatiya University, Warangal as KUMH 97.

It comes close to *C. assamica* and *C. fertilis* in possessing the fertile setae, but distinctly differs from the two species in conidial morphology. The comparison of the three species is given below.

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