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PROTOACHLYA ORYZAE SP. NOV. FROM NAINITAL

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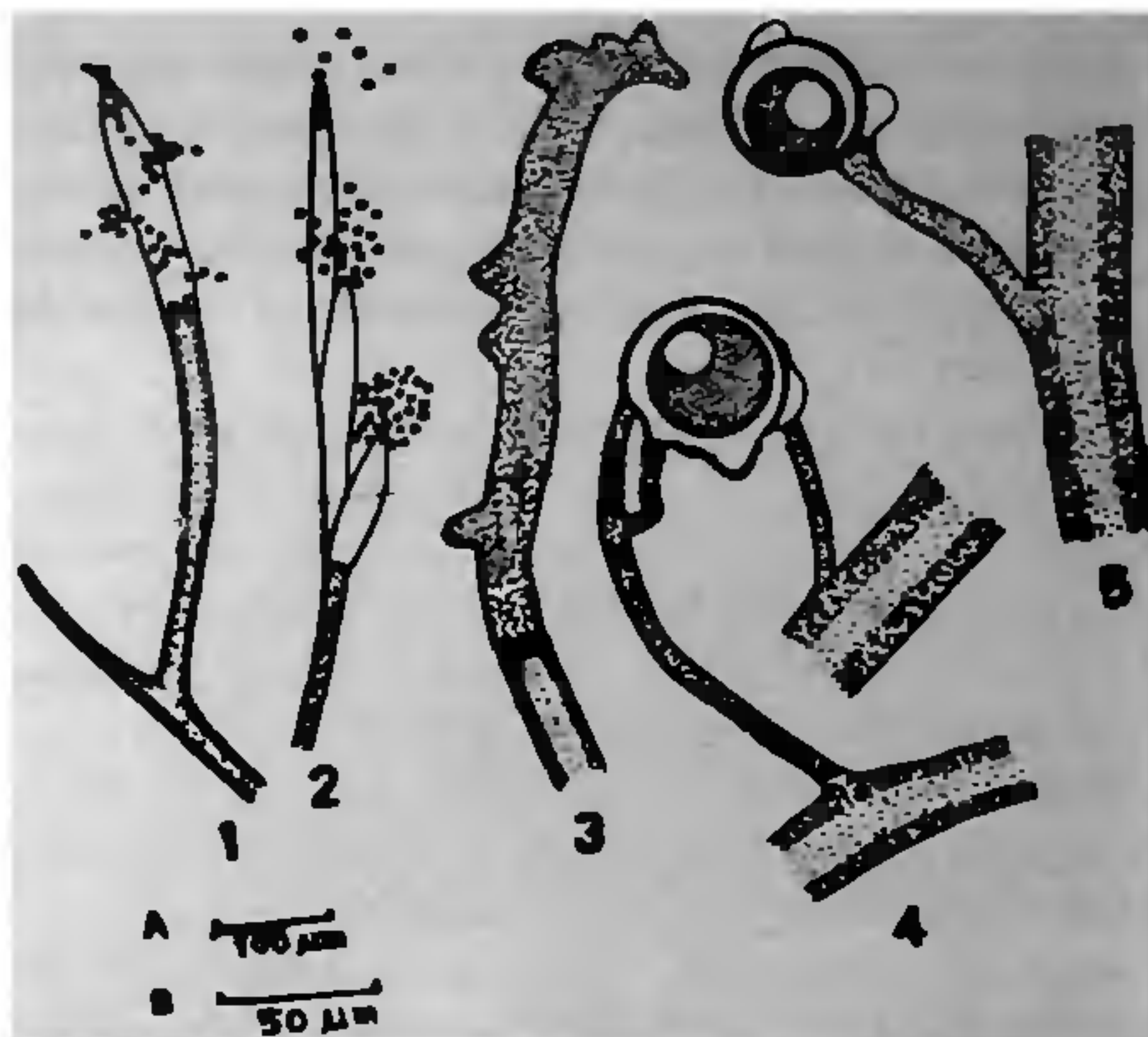
DURING the studies on aquatic fungi of Kumaun Himalaya, an undescribed species of *Protoachlya* Coker was isolated from rice fields and this is described in this communication.

Protoachlya oryzae Khulbe sp. nov.

Vegetative growth dense on hemp seed halves, 18–40 μm in dia, at base. Zoosporangia many, primary zoosporangia formed at the tip of hypha and secondary usually formed by cymose branching, below older ones, many papillate; long, cylindrical, 22–52.5 \times 95–600 μm . Zoospores liberate through apical pore or through subapical or lateral papillae, dipanetic, 8–10 μm in dia. Gemmae many. Oogonia many, spherical, wall smooth or papillate, 30–65 μm in dia., papillae 5–13 μm in diam. Antheridia androgynous, rarely dichinous or monoclinal. Oospore single, rarely 2–3, 18–38 μm in dia., mostly 22.5 μm and eccentric (figure 1).

On infected rice roots, Bhim Tal (Nainital), July 1981, R. D. Khulbe, IMI 262823 (type).

Hyphae vegetativae densis in semine *Cannabis sativae*, 18–40 μm diam. ad basin. Zoosporangiis pleura, primarie ad apices hypharum producta, secundaria vulgo efformata per ramificationem cymosam subsporangiiis maturioribus. dehiscence papillae pleura, cylindrica vel longa, 22–52 \times 95–60 μm . Zoosporae dispositae liberatae per porum apicalem vel interdum per porum subapicalem vel lateratem. Zoosporae dipaneticae; 8–10 μm diam. Gemmis pleura. Oogonia pleura, globosis, tunica levibus vel papillosae, 30–65 μm diam. Papillae 5–13 μm in diam. Antheridiis androgyna; raro dichina vel monoclina. Oosporiis singulae, raro 2–3, 18–38 μm diam, plerumque 22.5 μm . eccentricae.



Figures 1–5. *Protoachlya Oryzae*: 1. Zoosporangium with liberation of zoospores from different papillae; 2. Primary zoosporangium with saprolegnioid zoospores liberation and secondary zoosporangia with achlyoid zoospores liberation 3. Gemma; 4. Papillate oogonium with dichinous and androgynous antheridia and single, eccentric oospore; 5. Spherical oogonium with androgynous antheridium. Figures 1 & 2 scale A; Figures 3–5 scale B.

Infecteo oryza rhizae, Bhim Tal (Nainital) July, 1981
R. D. Khulbe, IMI 262823 (Type).

The present species is quite different from other species of *Protoachlya* namely *P. benekei* Furtado, *P. bonariensis* Beroqui, *P. hypogyna* Shanor and Conover, *P. mucronulata* Ziegler, *P. Polysporus* (lindstedt.) Apinis and *P. paradoxa* Coker due to presence of papillate sporangia and oogonia, mainly androgynous antheridia and eccentric oospore^{1–7}.

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