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A New Record of tetraploid cytotype of *Gymnocarpium dryopteris* (L.) Newman (Dryopteridaceae - Pteridophyta) from Uttar Pradesh, India

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Abstract

The present collection of *Gymnocarpium dryopteris* is the first report from Uttar Pradesh. The tetraploid cytotype of n=80 is recorded for the first time from Uttar Pradesh and this is the second distributional area in India for this cytotype.

Key words: New cytotype, *Gymnocarpium dryopteris* (L) Newman, Lakhimpur-Kheri, Uttar Pradesh

Short Notes

Gymnocarpium dryopteris is globally widespread in tropical and warm temperate region. *Gymnocarpium* is from Greek origin (gymnos means 'naked' and karpos means 'fruit') a reference to the lack of indusia and Dryopteris is also a Greek term (drys means 'oak' and Pteris means 'fern') so commonly known as oak fern tree belonging to the fern family Dryopteridaceae. Six species of *Gymnocarpium* occur in whole world (Kramer and Green, 1990) and one species in India (Dixit (1984; Pande and Pande, 2003). *Gymnocarpium dryopteris* is a rare species found in the Dudhwa tiger reserve, Lakhimpur-Kheri, Western Uttar Pradesh which is present in the foot hills of Himalaya and is situated between 25°52'N and 26°55'N Latitudes and 77°30'E and81°30'E Longitudes. The cytological examination of the species showed that this species is sexual tetraploid with n=80 (Fig.1).The present count is the second report of tetraploid cytotype for the *Gymnocarpium dryopteris* in India and the present study area becomes the second distributional area for this cytotype. Initially the tetraploid cytotype has been reported only from Kashmir- Tanmarg by Mehra and Khullar (1980). In the present study the species was found to have normal sporangia (Fig.2) with normal spore (Fig.3).

Specimen examined

Dudhwa Tiger Reserve – Lakhimpur – Kheri, 16.10.2012, 150m 512; 17.10.13, 160m, 520, 512. The specimens are deposited at the Department of Botany, St. Andrew's College (PG), Gorakhpur, UP.

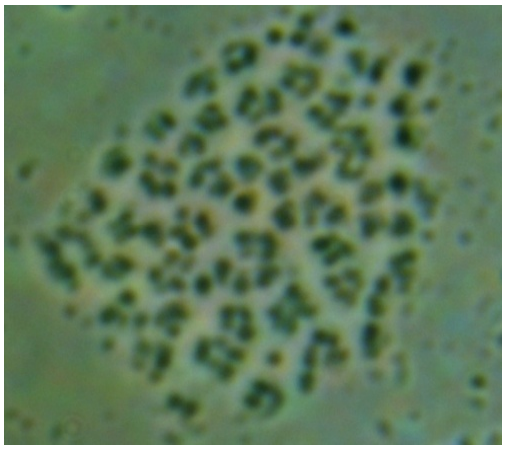

Fig.1: Meiotic squash (n=80) of aspore mother cell of *G. dryopteris* (x 1000).

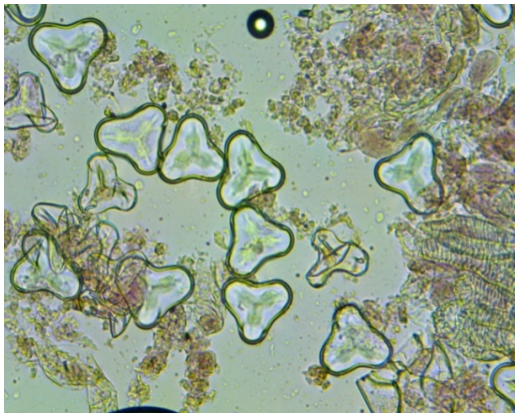

Fig.2: Normal spores (x 400)

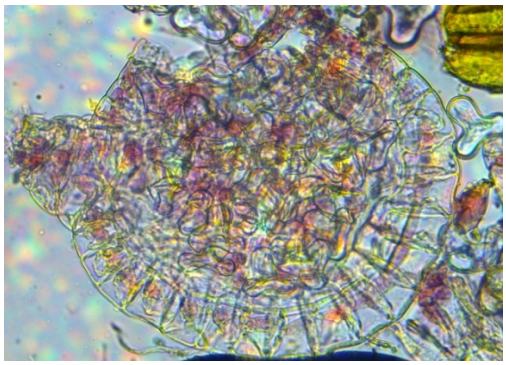

Fig.3: Sporangium showing normal spores (x=400)

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