

Validation of the names of three genera and three species of Indian fossil fungi

Ramesh K. Saxena^{1*}, Vidya D. Kapgate² and Paul M. Kirk³

¹Birbal Sahni Institute of Palaeosciences, 53 University Road, Lucknow–226007, India.
E-mail: rksaxena2207@yahoo.com

²Department of Botany, D.D. Bhojar Arts & Science College, Mouda-441104, India.
E-mail: vdkapgate65@gmail.com

³Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3DS, U.K.
E-mail: p.kirk@kew.org

*Corresponding author

Manuscript received: 25 March 2023
Accepted for publication: 07 April 2023

ABSTRACT

Saxena R.K., Kapgate V.D. & Kirk P.M. 2023. Validation of the names of three genera and three species of Indian fossil fungi. *Geophytology* 53(1): 25–27.

The objective of the present paper is to validate names of three genera and three species of Indian fossil fungi. These names were not validly published by their original authors because they were not registered with any recognized nomenclatural repository and therefore lacked citation of the registration identifier, which is a mandatory requirement for valid publication of the name of a fungal taxon (Article F.5.1, Turland et al. 2018). In order to validate these names, the first author registered the taxa names with Index Fungorum and obtained a unique Registration Identifier for each of them which are cited here. The names of genera validated here are: *Dematosporites* V.D. Kapgate & Wanjari ex R.K. Saxena, V.D. Kapgate & P.M. Kirk, *Erysiphacites* V.D. Kapgate ex R.K. Saxena, V.D. Kapgate & P.M. Kirk and *Ustilagosporites* V.D. Kapgate ex R.K. Saxena, V.D. Kapgate & P.M. Kirk. The names of species validated here are: *Dematosporites mahabalei* V.D. Kapgate & Wanjari ex R.K. Saxena, V.D. Kapgate & P. M. Kirk, *Erysiphacites nambudirii* V.D. Kapgate ex R.K. Saxena, V.D. Kapgate & P.M. Kirk and *Ustilagosporites mundkurii* V.D. Kapgate ex R.K. Saxena, V.D. Kapgate & P.M. Kirk.

Keywords: Fossil fungi, validation of taxa names, *Dematosporites*, *Erysiphacites*, *Ustilagosporites*, Intertrappean Beds, Early Tertiary, Mohgaonkalan, Madhya Pradesh, India.

INTRODUCTION

Kapgate and Wanjari (2014) introduced a new fossil fungal genus *Dematosporites*, typified by *D. mahabalei* from the Deccan Intertrappean Beds of Mohgaonkalan in Chhindwara District, Madhya Pradesh, India. Kapgate (2016) described two new fossil fungal genera, viz. *Erysiphacites* (type: *E. nambudirii*) and *Ustilagosporites* (type: *U. mundkurii*) from the same locality.

The above mentioned taxa have characters different from those of the known ones and deserve to be recognized as new. However, the species names were not registered with any recognized nomenclatural repository and thus lacked citation of the registration identifier required for valid publication of the name of a fungal taxon published on or after 01 January 2013 (Art. F.5.1, Turland et al. 2018). It is therefore obvious that these taxa names are not validly published and have

no status under the *Code* unless they are validly published (Art. 12.1, Turland et al. 2018). Since all these taxa are new and well recognizable, they are being validated here. To achieve this, the first author registered the names with Index Fungorum and obtained a unique Registration Identifier for each of them, and this is cited below with each taxon name.

VALIDATION OF TAXON NAMES

Genus: *Dematosporites* V.D. Kapgate & Wanjari ex R.K. Saxena, V.D. Kapgate & P.M. Kirk, **gen. nov.**

Index Fungorum Registration Identifier: 900371.

Type species: *Dematosporites mahabalei* V.D. Kapgate & Wanjari ex R.K. Saxena, V.D. Kapgate & P.M. Kirk, sp. nov. Monotypic.

Etymology: The name of the genus is after family *Dematiaceae*.

Remarks: The genus *Dematosporites* V.D. Kapgate & Wanjari was not validly published because the species name indicating its type was not validly published (Turland et al. 2018, Art. F.5.1). The type species is validated by providing the missing Registration Identifier.

Dematosporites mahabalei V.D. Kapgate & Wanjari ex R.K. Saxena, V.D. Kapgate & P.M. Kirk, **sp. nov.**

Index Fungorum Registration Identifier: 900372.

Validating description and illustration: In Kapgate & Wanjari, International Journal of Researches in Biosciences, Agriculture and Technology, Special Issue: 75, figures 1-2. 2014.

Holotype: Fu. 3-VDK, slide no. 68, plate 1, image 1. Stored at the Institute of Science, Nagpur, India.

Type Locality, Horizon and Age: Mohgaonkalan, Chhindwara District, Madhya Pradesh, India; Intertrappean Bed; Early Tertiary.

Etymology: The specific epithet honours Professor T.S. Mahabale of the Department of Botany, University of Poona, Pune, India.

Genus: *Erysiphacites* V.D. Kapgate ex R.K. Saxena, V.D. Kapgate & P.K. Kirk, **gen. nov.**

Index Fungorum Registration Identifier: 900373.

Type species: *Erysiphacites nambudirii* V.D. Kapgate ex R.K. Saxena, V.D. Kapgate & P.M. Kirk, sp. nov. Monotypic.

Etymology: The name of the genus is after family *Erysiphaceae*.

Remarks: The genus *Erysiphacites* V.D. Kapgate was not validly published because the species name indicating its type was not validly published (Turland et al. 2018, Art. F.5.1). The type species is validated by providing the missing Registration Identifier.

Erysiphacites nambudirii V.D. Kapgate ex R.K. Saxena, V.D. Kapgate & P.M. Kirk, **sp. nov.**

Index Fungorum Registration Identifier: 900374.

Validating description and illustration: In Kapgate, International Journal of Life Sciences, Special Issue A6: 118, figure 1.1-4. 2016.

Holotype: Fu. A-VDK, slide no. 38, plate 1, image 2. Stored at the Institute of Science, Nagpur, India.

Type Locality, Horizon and Age: Mohgaonkalan, Chhindwara District, Madhya Pradesh, India; Intertrappean Bed; Early Tertiary.

Etymology: The specific epithet honours Professor E.M.V. Nambudiri of the Department of Botany, University of Poona, Pune, India.

Genus: *Ustilagosporites* V.D. Kapgate ex R.K. Saxena, V.D. Kapgate & P.M. Kirk, **gen. nov.**

Index Fungorum Registration Identifier: 900375.

Type species: *Ustilagosporites mundkurii* V.D. Kapgate ex R.K. Saxena, V.D. Kapgate & P.M. Kirk, sp. nov. Monotypic.

Etymology: The name of the genus indicates its similarity with basidiomycetous fungus *Ustilago* (*Ustilaginaceae*, *Ustilaginales*).

Remarks: The genus *Ustilagosporites* V.D. Kapgate was not validly published because the species name indicating its type was not validly published (Turland et al. 2018, Art. F.5.1). The type species, *Ustilagosporites mundkurii*, is validated by providing the missing Registration Identifier.

Ustilagosporites mundkurii V.D. Kapgate ex R.K. Saxena, V.D. Kapgate & P.M. Kirk, **sp. nov.**

Index Fungorum Registration Identifier: 900376.

Validating description and illustration: In: Kapgate, International Journal of Life Sciences, Special Issue A6: 119, plate 2, image 1-4. 2016.

Holotype: Fu. B-VDK, slide no. 44, plate 2, image 2. Stored at the Institute of Science, Nagpur, India.

Type Locality, Horizon and Age: Mohgaonkalan, Chhindwara District, Madhya Pradesh, India; Intertrappean Bed; Early Tertiary.

Etymology: The specific epithet honours Professor B.B. Mundkur of the Department of Botany, University of Poona, Pune, India.

ACKNOWLEDGEMENT

The first author is grateful to the authorities of the Birbal Sahni Institute of Palaeosciences, Lucknow, India for library facilities.

REFERENCES

- Kapgate V.D. 2016. Fossil fungi from Deccan Intertrappean cherts of Madhya Pradesh, India. International Journal of Life Sciences, A6: 117–120.
- Kapgate V.D. & Wanjari M.H. 2014. An imperfect fossil fungi *Dematosporites mahabalei* from Central India. International Journal of Researches in Biosciences, Agriculture and Technology, Special Issue: 61–67.
- Turland N.J., Wiersma J.H., Barrie F.R., Greuter W., Hawksworth D.L., Herendeen P.S., Knapp S., Kusber W.-H., Li D.-Z., Marhold K., May T.W., McNeill J., Monro A.M., Prado J., Price M.J. & Smith G.F. (eds.). 2018. International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code) adopted by the Nineteenth International Botanical Congress Shenzhen, China, July 2017. Regnum Vegetabile 159. Glashütten: Koeltz Botanical Books. DOI <https://doi.org/10.12705/Code.2018>.