Validation of the genus *Desikacharya gen. nov.* (*Nostocaceae*, *Cyanobacteria*) and three included species.

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The genus designation "*Desikacharya*" Saraf & Prashant Singh (Saraf, Dawda & Singh, 2019: 7) is invalid as no type was designated. Additionally, two of the included binary designations, "*Desikacharya soli*" Saraf & Prashant Singh. and "*Desikacharya nostocoides"* Saraf & Prashant Singh were invalid as the designated types were not stated to be in a metabolically inactive state as required by Article 40.8 (Turland *et al.,* 2018), "For the name of a new species or infraspecific taxon published on or after 1 January 2019 of which the type is a culture, the protologue must include a statement that the culture is preserved in a metabolically inactive state." We therefore formally effect validation of these three names and effect a new combination for a valid name.

Desikacharya Saraf & Prashant Singh, *gen. nov.*
Description: Saraf, Dawda & Singh (2019: 7).
Type species: *Desikacharya nostocoides* Saraf & Prashant Singh, *sp. nov.*, below.
Etymology: named in honour of Thamarapu Vedanta Desikachary (1919-2005) of India, who contributed enormously to our knowledge of the Cyanobacteria.

Desikacharya nostocoides Saraf & Prashant Singh, *sp. nov.* (Figs 1-4)
Description: Saraf, Dawda & Singh (2019: 7).
Holotype (here designated): portion of a culture of *Desikacharya nostocoides* preserved in metabolically inactive form in the Global Collection of Cyanobacteria, Varanasi, India and is available under the accession number GCC 20181.
Type locality: Bhanpura, Mandsaur, Madhya Pradesh, India (24.56° N 75.76° E).

Desikacharya soli Saraf & Prashant Singh, *sp. nov.* (Figs 5-8)
Description: Saraf, Dawda & Singh (2019: 7).
Holotype (here designated): portion of a culture of *Desikacharya soli* preserved in metabolically inactive form in the Global Collection of Cyanobacteria, Varanasi, India and is available under the accession number GCC 20182.
Type locality: Bhanpura, Mandsaur, Madhya Pradesh, India (24.55° N 75.79° E).

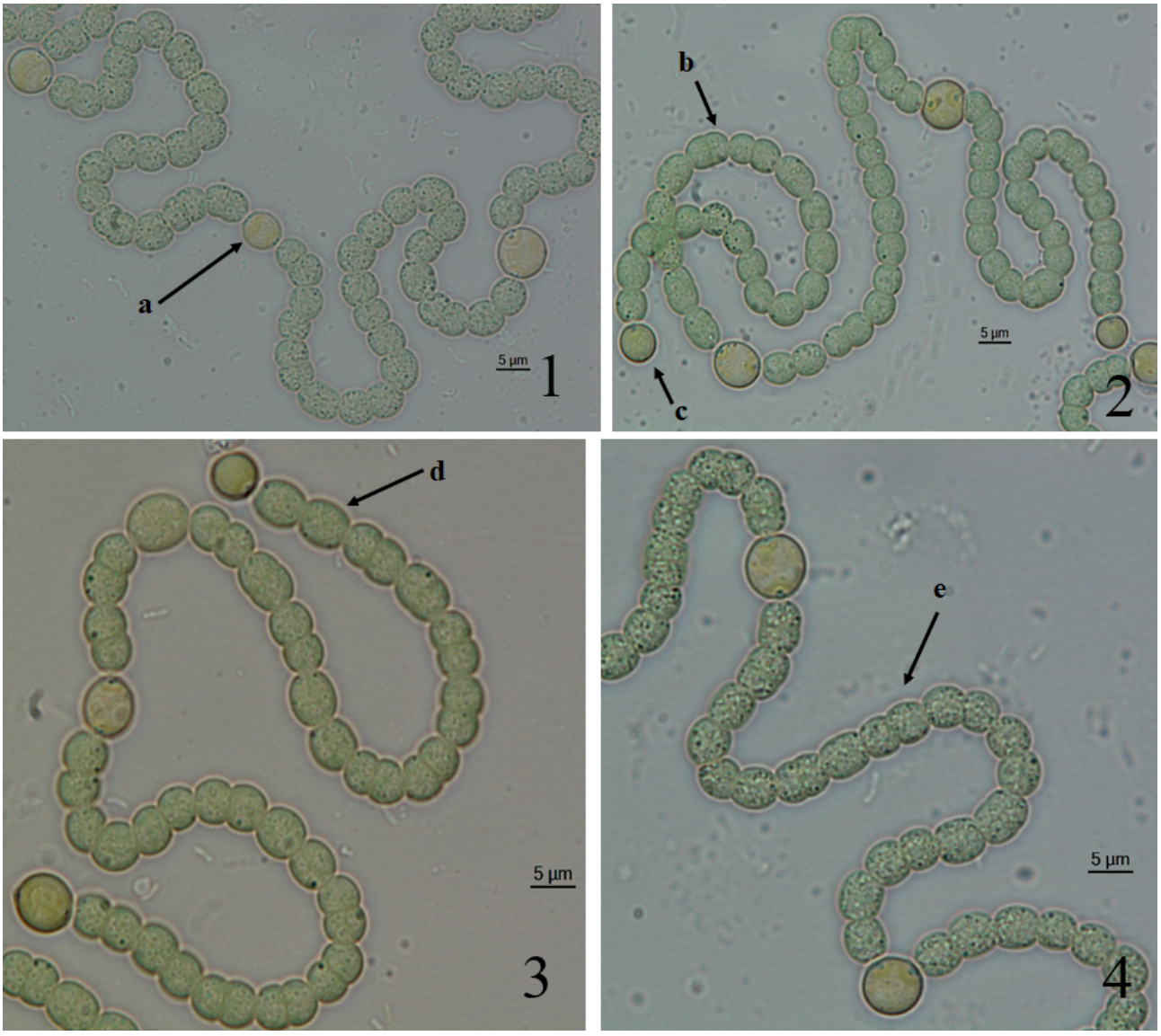
Desikacharya thermotolerans (Suradkar *et al.*) Saraf & Prashant Singh, *comb. nov.*
Basionym: *Nostoc thermotolerans* Suradkar *et al. International Journal of Systematic and Evolutionary Microbiology* Vol. 67: 1303, 2017.

Suradkar, A., Villanueva, C., Gaysina, L.A., Casamatta, D.A., Saraf, A., Dighe, G., Mergu, R., & Singh, P. (2017). *Nostoc thermotolerans* sp. nov., a soil dwelling species of *Nostoc* (Cyanobacteria) isolated from Madhya Pradesh, India. *International Journal of Systematic and Evolutionary Microbiology* 67:1296-1305.

Saraf, A., Dawda, H.G., & Singh, P. (2019). *Desikacharya* gen. nov., a phylogenetically distinct genus of Cyanobacteria along with the description of two new species, *Desikacharya nostocoides* sp. nov., and *Desikacharya soli* sp. nov., and reclassification of *Nostoc thermotolerans* to *Desikacharya thermotolerans* comb. nov. *International Journal of*

Systematic and Evolutionary Microbiology 69(2): 307-315.

Turland, N.J., Wiersema, 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., editors (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*, Vol. 159. pp. [i]-xxxviii, 1-253. Glashütten: Koeltz Botanical Books.



Figs 1-4. Filaments of *Desikacharya nostocoides, sp. nov.* from culture GCC 20181. Fig. 1. Intercalary heterocyte (a). Fig. 2. Normally barrel-shaped cells (b) with some cells being longer than wide. Terminal heterocyte (c). Fig. 3. Slightly thin mucilaginous sheath (d). Fig. 4. Prominently constricted cells with granular cytoplasm (e).

Figs 5-8. Filaments of *Desikacharya soli*, *sp. nov.* from culture GCC 20182. Fig. 5. Intercalary heterocyte (f). Fig. 6. Barrel-shaped cells (h) with prominent constrictions in between adjacent cells. Fig. 7. Thin mucilaginous sheath (g) covering the entire trichome. Terminal heterocyte slightly oblong in shape. Fig. 8. Filament (j) having terminal heterocytes at both ends (i).