Validation of "Dolichospermum hangangense H.J.Choi & M.-S.Han," nom. inval. (Aphanizomenonaceae, Cyanobacteria) from Han River, Korea

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On or after 1 January 1990, indication of the type of a name of a new taxon at the rank of genus or below must include one of the words "typus" or "holotypus", or its abbreviation, or its equivalent in a modern language (ICN Art. 40.6; Shenzhen Code, Turland *et al.* 2018). Otherwise the name is not validly published. A new species, *Dolichospermum hangangense* H.J.Choi & M.-S.Han, was recently described by Choi *et al.* (2018: 145, 147), but a "neotype" was specified as a fixed sample in 2.5% Lugol's solution of strain HYCP1307-DH5 and HYCC1307-DH38 collected from the Han River in July 2013. Choi et al. (2018) used more than one gathering for their intended protologue, additionally violating ICN Art. 8.2 (Shenzhen Code, Turland *et al.* 2018). The binary designation was thus not validly published, and this is rectified hereunder.

Dolichospermum hangangense H.J.Choi & M.-S.Han, sp. nov.

- Replaced binary designation: "*Dolichospermum hangangense* H.J.Choi & M.-S.Han" *nom. inval.* in Choi *et al. Algae. An International Journal of Algal Research* 33(2): 145, 147, figs 1–3, 2018.
- Description: Trichomes solitary, straight filaments; vegetative cells barrel-shaped to spherical, 5.1– 11.5 µm wide and 5.0–10.1 µm length, length: width (L:W) ratio 0.5–1.8, with gas vesicles. Heterocytes round, colourless or light green. Akinetes light green, thin cylindrical, narrower towards the ends than at the center, 10.9–15.8 µm wide and 19.7–51.9 µm length, L:W ratio 1.7– 3.8, separate from heterocytes.
- Holotype: metabolically inactive sample (fixed in 2.5% Lugol's solution) of strain HYCP1307-DH5 collected from the Han River in July 2013 deposited at the Library of Marine Samples, Korea Institute of Ocean Science & Technology, Geoje, Republic of Korea.
- Type locality: Lake Cheongpyeong (37°42'31.42" N, 127°27'07.30" E), Han River, Republic of Korea.

Etymology: derived from the Korean name of Han River.

Distribution: Lake Chuncheon, next to Chuncheon, Republic of Korea; Lake Cheongpyeong located by Gapyeong, Republic of Korea.

Reference strain: HYCP1307-DH5.

- Note: 16S rRNA and *rbcLX* gene sequences were obtained from the strain HYCP1307-DH5, which were deposited in NCBI GenBank (accession numbers KR154314 and KR154315).
- Choi, H.J., Joo, J.-H., Kim, J.-H., Wang, P., Ki, J.-S. & Han, M.-S. (2018). Morphological characterization and molecular phylogenetic analysis of *Dolichospermum hangangense* (Nostocales, Cyanobacteria) sp. nov. from Han River, Korea. *Algae. An International Journal of Algal Research* 33(2): 143–156.

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.