



Nomenclatural notes on '*Cycas bglswamyii* D.D. Pant ex P.K. Agrawal, M. Akhtar and R.C. Srivast.' (Cycadaceae) – an invalid name

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Abstract: '*Cycas bglswamyii* D.D. Pant ex P.K. Agrawal, M. Akhtar and R.C. Srivast.', a new species published in 2020, is found to be an invalidly published name as the authors described the species only by citing photograph and did not cite any specimen as type or holotype. Some other issues related to publication of the name are also discussed in the present communication.

Keywords: Bellur; *Cycas*; iconotype; *indica*; Mysore *Cycas*; *swamyi*

Introduction

The aim of this paper is to draw the attention of researchers to an Article of the Code, noncompliance of which prevented the name of a new species published by Agrawal *et al.* (2020) to be validly published. Besides, some other nomenclature related issues concerning the publication of the name are also discussed.

Swamy (1948) tentatively referred a few "pure" stands of *Cycas* sp. found in Hassan District of the erstwhile Mysore State of British India (now in Karnataka, India) to *Cycas circinalis* L. Pant (1991, 2002) merely proposed the 'Mysore *Cycas*' as a new variety of *Cycas circinalis*, viz. *C. circinalis* var. *swamyi* D.D. Pant, due to their peculiar branching pattern. However, Pant (1991, 2002) did not provide any description/diagnosis and citation of type specimen and hence, the name *C. circinalis* var. *swamyi* was an invalidly published. Singh & Radha (2008) found that apart from the isotomous branching pattern in the stem, the Karnataka *Cycas* population possesses a distinct robust habit, distinct morpho-anatomical characters in the pinnae,

distinct megasporophylls and a distinct attachment of the ovules. Therefore, Singh & Radha (2008) described the Karnataka *Cycas* population/'Mysore *Cycas*' as a new species of *Cycas* L., viz. *Cycas swamyi* Rita Singh & P. Radha by following all the rules of Code required for a valid publication. However, according to 'The World List of Cycads, online edition' (Calonje *et al.*, 2013–2021) and 'Plants of the World Online' (POWO, 2021), *Cycas swamyi* is presently treated as a synonym of *Cycas indica* A. Lindstr. & K.D. Hill. Interestingly, Agrawal *et al.* (2020) again described the 'Mysore *Cycas*' as '*Cycas bglswamyii* D.D. Pant ex P.K. Agrawal, M. Akhtar and R.C. Srivast.'. They differentiated their species from *Cycas swamyi* and *Cycas indica* by its habitat, height of trees, length of leaves, numbers of leaflets, megasporophylls, number of ovules per megasporophyll and length of mature ovules, though in our opinion these characters are overlapping which is evident from the comparison table (Table 1; not presented here) provided by Agrawal *et al.* (2020).

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Agrawal et al. (2020) while describing '*Cycas bglswamyii* D.D. Pant ex P.K. Agrawal, M. Akhtar and R.C. Srivast.' cited 'Type: *Iconotype*: India: Mysore State, Hasan District, Bellur, 27.12.42, *BGL Swamy*, 1 (Swamy, BGL in Amer. J. Bot. 35(2), 77-88. 1948)'. In this regard it is to be noted that '*BGL Swamy*, 1' is actually the 'Fig.1' illustrated by Swamy (1948: 78) on 27.12.42 depicting the habit sketch of plant at Bellur, Hassan District. Agarwal et al. (2020) wrongly cited the entire range of pages (Swamy, 1948: 77-88) along with the illustration while citing the 'Iconotype'.

International Plant Name Index (IPNI, 2021) cites: *Cycas bglswamyi* D.D. Pant ex P.K. Agrawal, M. Akhtar & R.C. Srivast., Int. J. Curr. Res. Biosci. Pl. Biol. 7(8): 23 (August 2020), with the Nomenclatural Notes: Status: nom. inval. Type cited as iconotype in Amer. J. Bot. [holotype citation lacking] [epublished], as 'bglswamyii'. Additionally, it was observed that IPNI corrected the specific epithet to 'bglswamyi' as the authors incorrectly Latinized it as 'bglswamyii'.

In the same year, i.e. in 2020, Srivastava (2020) published a book, entitled 'Mysore Cycas' where the name *Cycas bglswamyi* D.D. Pant ex P.K. Agrawal, M. Akhtar & R.C. Srivast. was published once again. IPNI (2021) also provided the same above mentioned nomenclatural notes for this publication. It is unknown that under what circumstances the same new species was published twice in two different publications. It is definitely not a good instance to be followed.

The type citation of the name *Cycas bglswamyi* violated Art. 40.4. of ICN (Turland et al., 2018) which states: 'For the purpose of Art. 40.1, the type of a name of a new species or infraspecific taxon (fossils excepted: see Art. 8.5) may be an illustration prior to 1 January 2007; on or after that date, the type must be a specimen

(except as provided in Art. 40.5).' The term 'iconotype' is unofficially used and not in the Code. Quick Google search showed that there was such a proposal to include the term 'Iconotype' by Silva (1993) in the Tokyo Code but it was not included (see Greuter et al., 1994). It is also not in the Shenzhen Code (Turland et al., 2018) and therefore, the use of the term 'Iconotype' should be avoided.

There are two more issues with this name. According to the opinion of Dr. K.N. Gandhi, Senior Nomenclatural Registrar of the Harvard University Herbaria, Cambridge, USA that the Code does not resist the formation of epithets in an arbitrary manner, but very rarely people coin epithets arbitrarily. So, '*bglswamyi*' is technically alright but should have been avoided according to Rec. 20A.1(c) of ICN (Turland et al., 2018) as it is difficult to pronounce in Latin due to presence of five consecutive consonants ('bglsw') at the beginning of the specific epithet. The authors ascribed the specific epithet '*bglswamyii*' to D.D. Pant, but Pant (2002) spelled the epithet as *swamyii* (Pant, 2002: 52) and as *swamyi* (Pant, 2002: 55) and that too at varietal level. So, the name *bglswamyi* cannot be ascribed to D.D. Pant as he used different epithet (*swamyi/swamyii*, not *bglswamyi*) at different rank (varietal, not at the rank of species).

We hope that this communication would be helpful to many other researchers to avoid the mistakes done by Agrawal et al. (2020) in their future publications.

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