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## A new combination in *Dichanthium* and second-step lectotypification of *Andropogon armatus* (Poaceae: Andropogoneae)

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### Abstract

A new combination is made for *Bothriochloa jainii* Deshp. & Hemadri under the genus *Dichanthium* Willemet as *D. jainii* (Deshp. & Hemadri) R.Kr.Singh & Arigela. Second-step lectotype is designated for the name *Andropogon armatus* Hook.f.

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### INTRODUCTION

The Old-world genus *Dichanthium* Willemet consists of about 19 species (WCSP 2023), distributed in tropical and subtropical region of old world, and introduced in tropical and subtropical region of new world. So far, 11 species have been recorded for the Indian flora, namely *D. annulatum* (Forssk.) Stapf, *D. aristatum* (Poir.) C.E.Hubb., *D. armatum* (Hook.f.) Blatt. & McCann, *D. caricosum* (L.) A.Camus, *D. concanense* (Hook.f.) S.K.Jain & Deshp.,

*D. foulkesii* (Hook.f.) S.K.Jain & Deshp., *D. foveolatum* (Delile) Roberty, *D. mccannii* Blatt., *D. panchganiense* Blatt. & McCann, *D. paranjpyeanum* (Bhide) Clayton and *D. tuberculatum* (Hack.) Cope. Among them, 7 species viz. *D. armatum*, *D. concanense*, *D. foulkesii*, *D. mccannii*, *D. panchganiense*, *D. paranjpyeanum* and *D. tuberculatum* are endemic to India.

Deshpande and Hemadri (1971) described *Bothriochloa jainii* based on specimens collected by Hemadri from Durga Killa, Junnar, Pune district, Maharashtra, India. They also cited paratypes in the protologue and presently all housed at BSI. Later, Deshpande (1981) transfer *B. jainii* to the genus *Dichanthium* as *D. jainii*, but for the basionym, she cited the pagination of the whole publication, not the exact page number. Therefore, the combination is invalid according to the Article 41.5 of ICN (Turland et al. 2018). Here, we made a new combination for *Bothriochloa jainii* Deshp. & Hemadri under the genus *Dichanthium* in accordance to Article 41 of ICN (Turland et al. 2018). The name *Andropogon armatus* Hook.f. was inadvertently typified by Deshpande (1984) prior to 1 January 2001, but it requires second-step lectotypification, which is selected here according to the Article 9.17 of ICN (Turland et al. 2018).

#### NEW COMBINATION

***Dichanthium jainii*** (Deshp. & Hemadri) R.Kr.Singh & Arigela, *comb. nov.*

*Bothriochloa jainii* Deshp. & Hemadri, Indian Forester 97(10): 593. 1971.

*Dichanthium jainii* (Deshp. & Hemadri) Deshp., Bull. Bot. Surv. India 21(1-4): 198. 1981, *nom. inval.*

**Holotype:** INDIA. Maharashtra: Pune district, Junnar, Durga Killa, 29 October 1964, K. Hemadri 104241 A (CAL0000002312!, Figure 1); isotypes K. Hemadri 104241 B (BSI0000000536!), K. Hemadri 104241 C (BSI0000000537!), K. Hemadri 104241 D (K000245667!); K. Hemadri 104241 E (L0043835!).

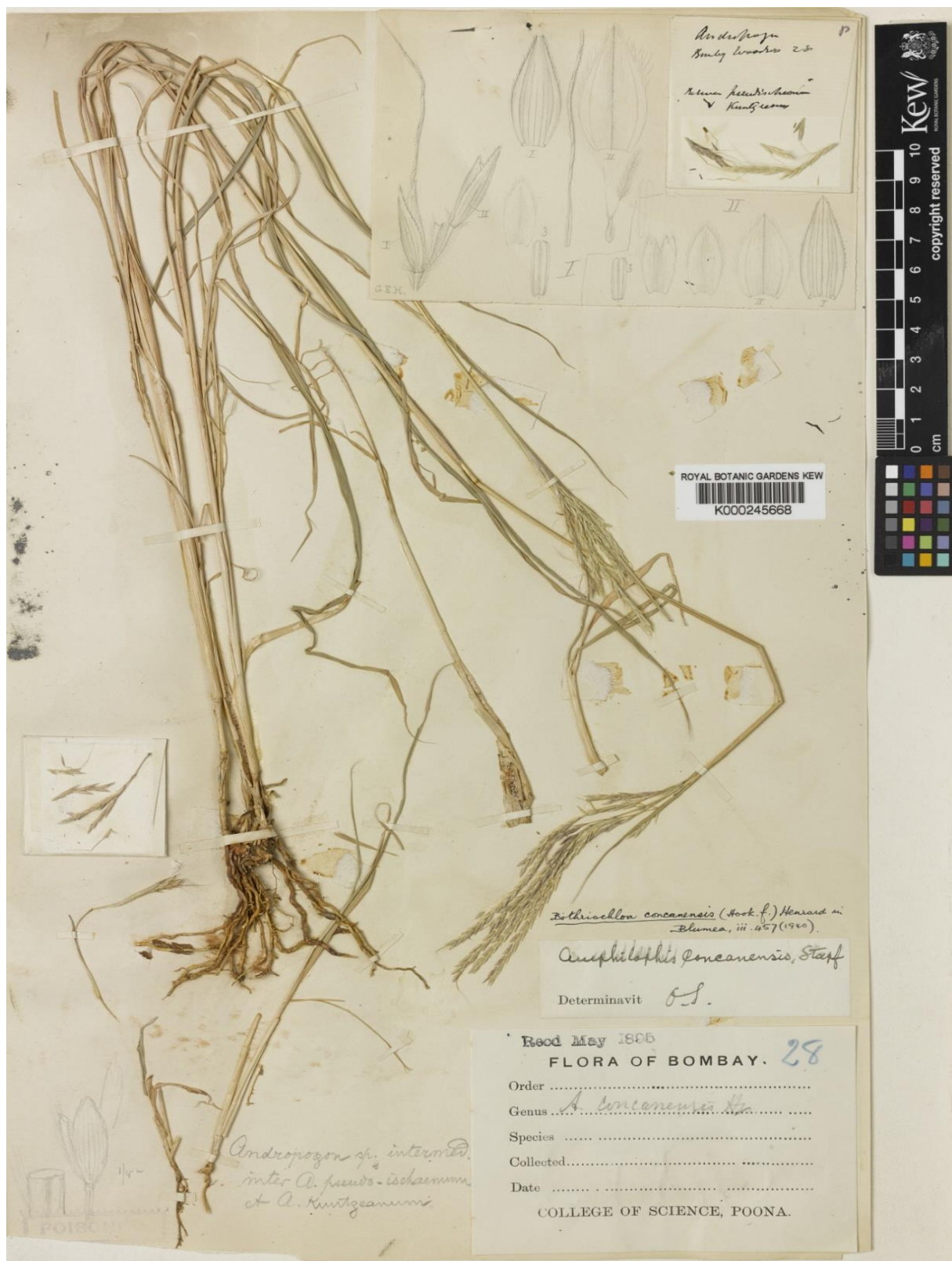
**Distribution:** Endemic to Sahyadri mountain range of Western Ghats in Maharashtra, India.

**Notes:** *Dichanthium jainii* differs considerably from *D. concanense* (Figure 2) in having larger leaf blade and bullous hairy on both surfaces (vs. shorter and glabrous), sessile spikelets 4.5–6.5 mm long (vs. 3–4 mm long), pedicelled spikelets 5.5–9 mm long and lower glume 14–19 nerved (vs. 4–5 mm long and 8–10 nerved). Former species of *Dichanthium* does not comes under the variability ranges of latter as pointed by Landge and Shinde (2021).

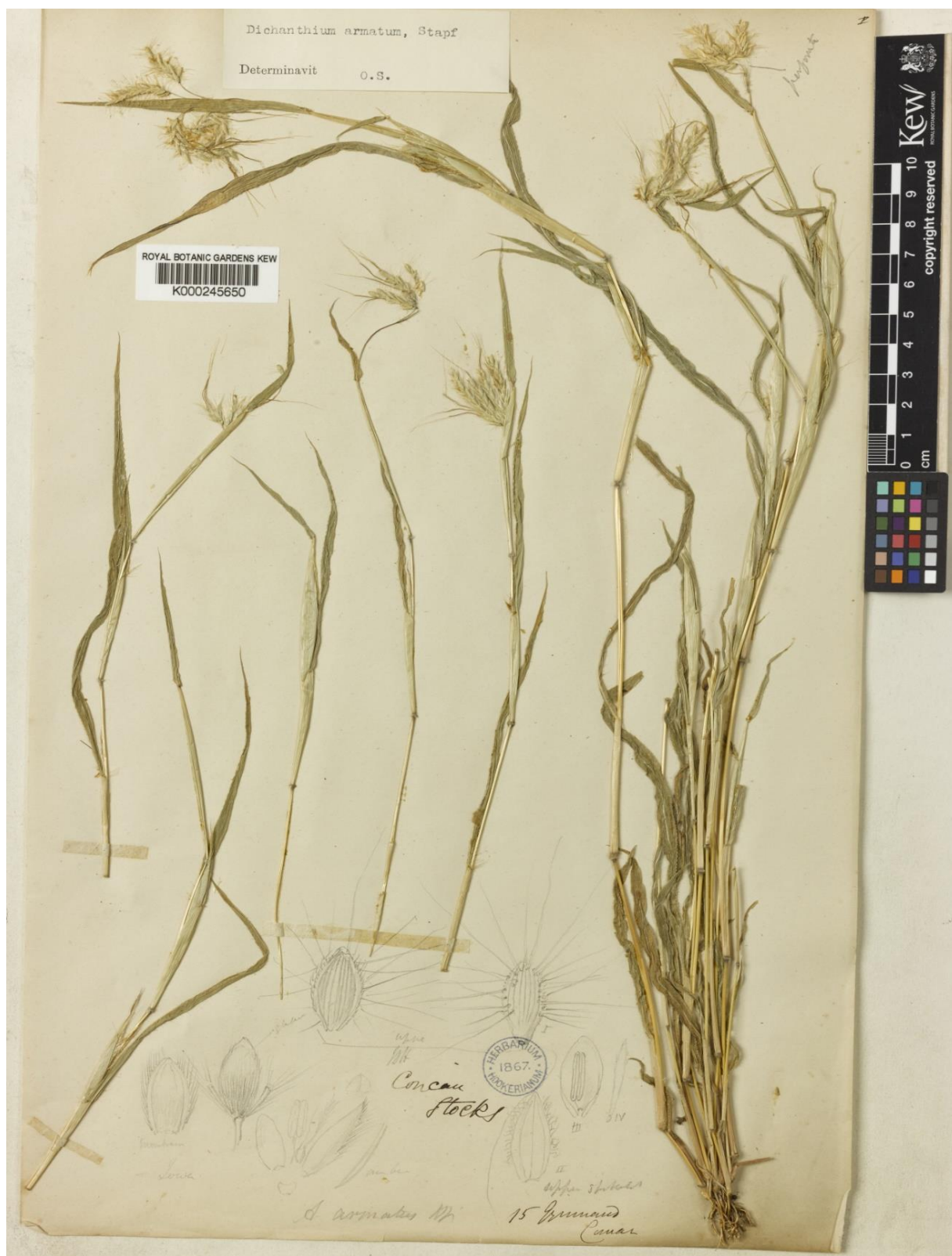


Figure 1: Holotype of *Bothriochloa jainii* (CAL0000002312, © Central National Herbarium, Howrah)



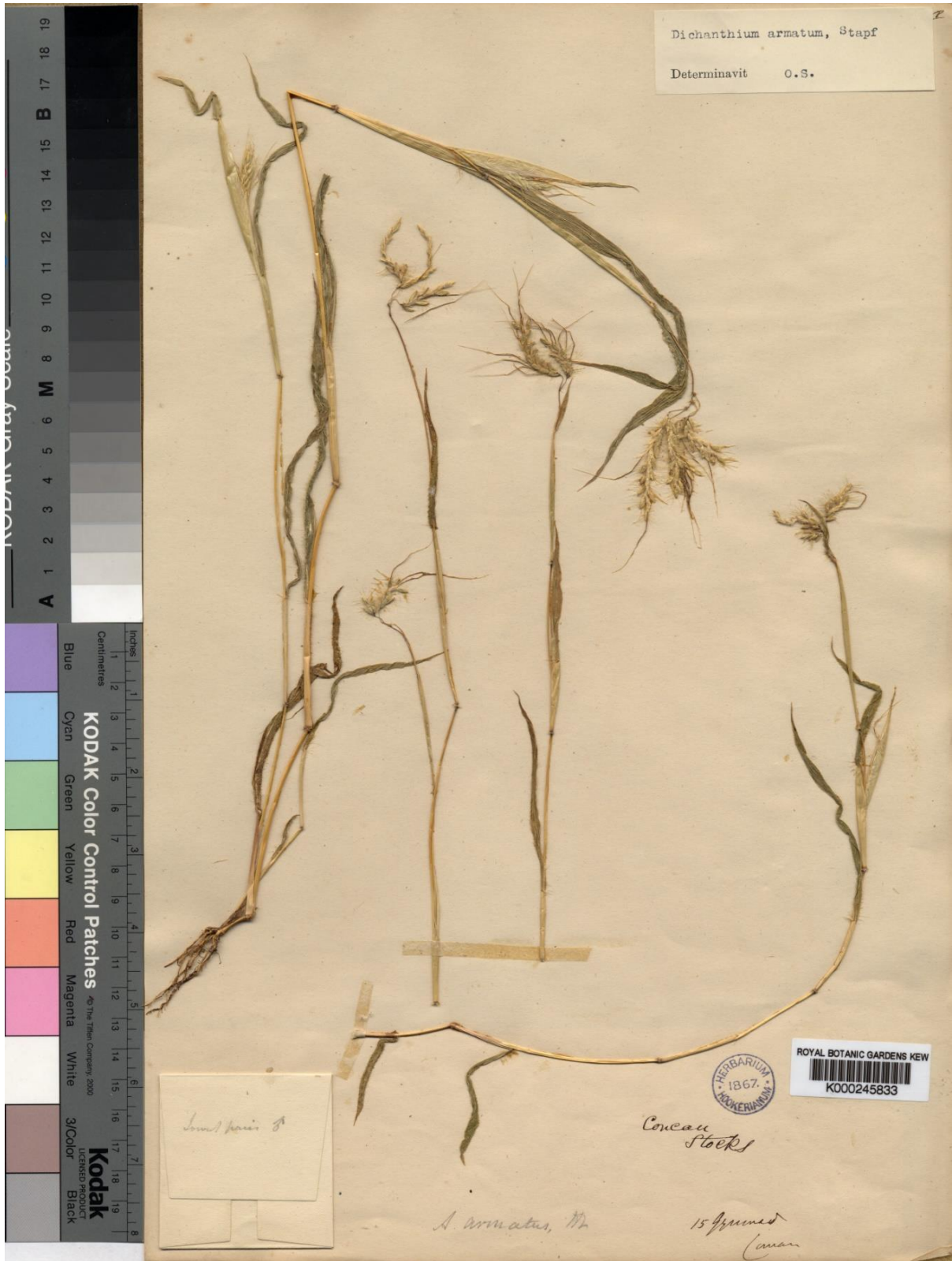


**Figure 2:** Holotype of *Dichanthium concanense* (Hook.f.) S.K.Jain & Deshp. (K000245668, © The Trustees of the Royal Botanic Gardens, Kew)



**Figure 3:** Lectotype of *Andropogon armatus* Hook.f. (K000245650, © The Trustees of the Royal Botanic Gardens, Kew)





**Figure 4:** Isolectotype of *Andropogon armatus* Hook.f. (K000245833, © The Trustees of the Royal Botanic Gardens, Kew)

### Second-step lectotypification

*Dichanthium armatum* (Hook.f.) Blatt. & McCann, J. Bombay Nat. Hist. Soc. 32: 425. 1928.  
*Andropogon armatus* Hook.f., Fl. Brit. India [J. D. Hooker] 7: 197. 1896.

**Lectotype** (first-step designated by [Deshpande 1984](#)): INDIA. Concan, *Stocks* (K, two sheets); second-step designated here: INDIA. Concan (Konkan), *s.d.*, *J.E. Stocks 15* (K000245650!, [Figure 3](#)); isolectotype K000245833! ([Figure 4](#)).

**Distribution:** Endemic to Western Ghats region of Maharashtra, India.

**Notes:** Hooker ([1896](#)) described *Andropogon armatus* based on specimens collected by J.E. Stocks from Concan, India. In keeping with the practice of those times, he did not designate a holotype nor mention the name of the herbarium where the specimens were housed. Two specimens collected by Stocks from Concan, India were traced at K (K000245650 and K000245833) and both specimens were annotated by J.D. Hooker as “*A. armatus* Hf.”. [Deshpande \(1984\)](#) cited type for the name *A. armatus* Hook.f. as “Type: India: Concan *Stocks* (K). According to the Article 9.17 in [Turland et al. \(2018\)](#), [Deshpande’s](#) type citation must be regarded as the first-step lectotypification, and it can be further narrowed to a single specimen by second-step lectotypification. The specimen K000245650 contains mature culms, leaves, well-developed inflorescences and drawing of spikelets on the sheet by J.D. Hooker, therefore it is designated here as the second-step lectotype of the name *A. armatus* Hook.f.

### ACKNOWLEDGMENTS

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