Table 1 *Growth pattern of 5-month-old seedlings of Machilus bombycina*

Seedling type	Shoot length (cm)	Root length (cm)	Number of leaves per seedling	Leaf size	
				Length (cm)	Breadth (cm)
'Singlet'*	10.70 ± 0 26	6 90 ± 4 60	7 80 ± 4 00	5 94 ± 2 47	2 06 ± 1 30
Twins + (a)	8 76 ± 2 58	6 20 ± 3 30	6 00 ± 3 20	3 94 ± 0 74	1 40 ± 0 40
(b)	6.90 ± 0 60	5 10 ± 2 30	3 40 ± 1 00	3 49 ± 0 90	1 20 ± 0 40
Triplets**					
(a)	9 74 ± 1 74	5 70 ± 1 67	7 20 ± 2 20	4 18 ± 0 44	1 42 ± 0 15
(b)	8 60 ± 0 23	5 54 ± 4 00	6 00 ± 2 40	4 90 ± 1 20	1 62 ± 0 60
(c)	7 50 ± 2 85	5 08 ± 0 24	4 20 ± 1 80	4 64 ± 0 58	1 60 ± 0 10

* Each value is an average of 20 seedlings. + Each value is an average of 20 seedlings ** Each value is an average of 6 seedlings. a,b,c, indicate the seedlings in twins and triplets

from seed germination in the nursery beds To our knowledge this is the first report of twins and triplets for Lauraceae.

Of 1000 seedlings screened 30 days from germination, 45 were twins (4.5%) and 6 were triplets (0 6%). Each seedling was complete with an independent root-shoot axis (figure 1 b,c) The member seedlings were detached and planted separately to study their growth in comparison to that of 'singlet' seedlings, *i.e.* single seedlings obtained from seeds. Five months after planting all twins and triplets developed into independent saplings. They did not differ from the singlets except in growth rate. The data on the lengths of shoot and root, the number of leaves per seedling, and the leaf size show that the singlets are superior to twins and triplets (table 1). In the twins and triplets usually one of the seedlings showed vigorous growth. Studies on the origin of twins and triplets are in progress

INTERFERTILITY STUDY AND OXIDASE TEST OF *DUPORTELLA TRISTICULA* (B & BR) REINKING

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FROM an exhaustive study on several members of Polyporaceae Nobles[1] put forward the hypothesis that in this family, the species which possess bipolar type of interfertility give a negative reaction in oxidase tests and are associated with brown rots; while the species showing the tetrapolar type of interfertility give positive reactions in oxidase tests and cause white rots. She claimed taxonomic value for the type of decay, type of interfertility and results of oxidase tests. Accurate assessment of taxonomic importance of these characters requires a collaborative study on these aspects of many other families of Basidiomycetes, particularly from tropical regions which still remain to be investigated. The present paper gives the results of a study of the interfertility test and oxidase reactions of *Duportella tristicula* (B & Br) Reinking, a wood-rotting member of Corticiaceae, together with the type of rot it produces.

Two sporophores of *D. tristicula* were collected—one from Bankura, West Bengal, India on a dead branch of *Gossypium herbaceum* L and the other from Burdwan, West Bengal, India on a dead branch of *Saraca indica* L. These two sporophores along with their hosts have been deposited in the Mycological Herbarium of Burdwan Raj College, Burdwan, West Bengal, India under the numbers BRCMH T51, and BRCMH T53 respectively.

Rot: It was found that *D. tristicula* caused white rot on both the hosts examined.

Oxidase test: Oxidase test was determined by growing the polysporous mycelia of both the isolates of *D. tristicula* for seven days on plates of malt agar containing 0.5% gallic acid and 0 5% tannic acid following the method laid down by Davidson *et al*[2]. The appearance of dark coloured zones in the media presented positive proof of the production of extracellular oxidase enzymes.

Interfertility test: Twenty monosporous cultures were isolated from each of the two sporophores following the usual dilution method. When the monosporous cultures showed good growth they were checked carefully for clamp connections The absence of clamp connections was taken as confirmation of their mono-

karyotic nature The monosporous cultures obtained from a single sporophore were paired among themselves in all possible combinations on 2.5% malt agar slants. The culture tubes containing paired inocula were incubated at room temperature (28–32 C) for about a fortnight and then the line of contact between the paired mycelia was examined for the presence of clamp connections. The result of pairings has been presented in table 1 for isolate number BRCMH T51 and in table 2 for isolate number BRCMH T53, where a plus sign (+) designates the presence of clamp connections and a minus sign (−) indicates their absence.

It is evident from tables 1 and table 2 that the single spore cultures from each of the two sporophores of *D. tristicula* fall into four groups on the basis of their ability to form dikaryotic mycelia, recognizable by the presence of clamp connections. The genetic constitutions of the four groups have been designated as A_1B_1, A_2B_2, A_1B_2 and A_2B_1 following Nobles *et al*[3]. Dikaryotic mycelia were formed only in matings between $A_1B_1 \times A_2B_2$ and $A_1B_2 \times A_2B_1$, *i.e.* between mycelia having no common allele. Therefore *D. tristicula* is heterothallic and possesses tetrapolar type of interfertility with allelomorphs for heterothallism at two loci.

From the results obtained it may be concluded that the hypothesis of Nobles on the Polyporaceae also finds support in *D. tristicula*, a fungus belonging to the family Corticiaceae.

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Table 1 *Pairings of 20 monosporous mycelia derived from a single sporophore of Duportella tristicula (B & Br) Reinking (Isolate number BRCMH T51)*

		A_1B_1				A_2B_2					A_1B_2							A_2B_1			
		1	5	6	11	3	4	16	18	20	2	7	8	9	13	14	19	10	12	15	17
A_1B_1	1	−	−	−	−	+	+	+	+	+	−	−	−	−	−	−	−	−	−	−	−
	5	−	−	−	−	+	+	+	+	+	−	−	−	−	−	−	−	−	−	−	−
	6	−	−	−	−	+	+	+	+	+	−	−	−	−	−	−	−	−	−	−	−
	11	−	−	−	−	+	+	+	+	+	−	−	−	−	−	−	−	−	−	−	−
A_2B_2	3	+	+	+	+	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
	4	+	+	+	+	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
	16	+	+	+	+	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
	18	+	+	+	+	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
	20	+	+	+	+	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
A_1B_2	2	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	+
	7	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	+
	8	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	+
	9	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	+
	13	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	+
	14	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	+
	19	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	+
A_2B_1	10	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+	+	−	−	−	−
	12	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+	+	−	−	−	−
	15	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+	+	−	−	−	−
	17	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+	+	−	−	−	−

Table 2 *Pairings of 20 monosporous mycelia derived from a single sporophore of Duportella tristicula (B & Br) Reinking (Isolate number BRCMH T53)*

		A_1B_1					A_2B_2				A_1B_2							A_2B_1				
		1	2	6	15	19	10	14	17	20	3	4	8	9	11	16		5	7	12	13	18
A_1B_1	1	−	−	−	−	−	+	+	+	+	−	−	−	−	−	−		−	−	−	−	−
	2	−	−	−	−	−	+	+	+	+	−	−	−	−	−	−		−	−	−	−	−
	6	−	−	−	−	−	+	+	+	+	−	−	−	−	−	−		−	−	−	−	−
	15	−	−	−	−	−	+	+	+	+	−	−	−	−	−	−		−	−	−	−	−
	19	−	−	−	−	−	+	+	+	+	−	−	−	−	−	−		−	−	−	−	−
A_2B_2	10	+	+	+	+	+	−	−	−	−	−	−	−	−	−	−		−	−	−	−	−
	14	+	+	+	+	+	−	−	−	−	−	−	−	−	−	−		−	−	−	−	−
	17	+	+	+	+	+	−	−	−	−	−	−	−	−	−	−		−	−	−	−	−
	20	+	+	+	+	+	−	−	−	−	−	−	−	−	−	−		−	−	−	−	−
A_1B_2	3	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−		+	+	+	+	+
	4	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−		+	+	+	+	+
	8	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−		+	+	+	+	+
	9	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−		+	+	+	+	+
	11	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−		+	+	+	+	+
	16	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−		+	+	+	+	+
A_2B_1	5	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+		−	−	−	−	−
	7	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+		−	−	−	−	−
	12	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+		−	−	−	−	−
	13	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+		−	−	−	−	−
	18	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+		−	−	−	−	−

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