fasciculis stipitibus 2–7 divergentibus estromate interdum singulatim enatis composita; conidiophora medio-aureo-brunnea vel griseobrunnea, apicem versus pallidiora, recta usque flexuosa vel undulata, pluries, geniculata spicae tritici similia, simplicia 2–6 septate, glabrottunicata, cicatricibus distinctis plerumque 2–5 praedita non attenuata, ad apicem conico-truncatum vel subconicam latioria (60–0–) 80·0–100·0 (–147·0) μ, longa, 4·0–5·5 μ lata; conidia obclavato clindrica, recta vel curvata, parce attenuata, pallide aurantio brunnea, ad basim conico-truncata, cictrice subdistincta signata, ad apicem conica val subobtusa 3–7 (plerumque 4–5–) septata, (36·0–) 48·0–60·0 (–78·0) μ longa, 4·2–6·0 μ lata.

Hab. in foliis *Dioscoreae alatae* L., Salikihat, Golaghat, Assam, 21–11–1977, Coll. U. N. Saikia (H.C.I.O. 32660 typus).

Fruiting hypophyllous and profuse. Stromata present but poorly developed, composed of few, pale to dark brown cells upto 24 μm in diam. Conidiophores in fascicles of 2–7 divergent stalks arising from the stromata, mid-golden brown to olivaceous or greyish brown, pale towards the apex, straight or flexuous, geniculate several times often resembling the rachis of an earhead of wheat, simple, 2–6 septate, smooth-walled, with 2–5 distinct spore scars, not attenuated, apex often slightly wider than at the base, tip conico-truncate to sub-conic, (60·0–) 80·0–100·0 (–147·0) × 4·0–5·5 μm. Conidia obclavato-cylindric, straight to slightly curved, pale orange brown, 3–7 (mostly 4–5 septate; base conico-truncate with a fairly distinct scar, tip conical to sub-obtuse; measuring (36·0–) 48·0–60·0 (–78·0) μm long and 4·2–6·0 μm in breadth.

On *Dioscorea alata* L., Salikihat, Golaghat, Assam, 21–11–1977, U. N. Saikia, (H.C.I.O. 32660 type).

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SEXUALITY OF *POLYPORUS LEUCOSPONGIA* COOKE AND HARKNESS

MODERN mycologists[3, 4, 6] consider the type of sexuality as an important character for solving taxonomic problems of fungi. Although sexuality of a large number of species belonging to different genera have already been determined, *Polyporus leucospongia* Cooke and Harkness has not been studied, so far, from this point of view. The present paper gives the result of interfertility study of *P. leucospongia*, a wood-inhabiting polypore of India and North America[1].

Twenty-five monosporous cultures were isolated from a fresh sporophore of *P. leucospongia* following the usual dilution method. The sporophore was collected from the campus of Visva-Bharati University, Santiniketan, West Bangal, India, on a dead stem of *Bambusa arundinacea* Willd. and it has been deposited in the Mycological Herbarium of the Visva-Bharati University under the number VBMH 79421. When all the cultures showed good growth they were examined thoroughly to find if there were clamp connections in any of these cultures. Absence of clamp connection was taken as confirmation of their monokaryotic nature. Ultimately 20 monokaryotic cultures were taken into consideration and 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 I where a plus sign (+) designates the presence of clamp connections and a minus sign (–) indicates their absence.

It will be evident from Table I that single-spore cultures from one sporophore of *P. leucospongia* fall into two groups on the basis of their ability to form clamp connections which mean that the species is heterothallic and possesses bipolar type of sexuality with allelomorphs for heterothallism at one locus only. The genetic constitutions of the two groups have been designated as A_1 and A_2 following Burdsall and Lombard[3].

Mention may be made in this connection that *P. leucospongia* causes brown rot[1] and shows negative result on oxidase test[2]. Therefore, *P. leucospongia* lends further support to the hypothesis of Nobles[5] that in Polyporaceae, the species which possess bipolar type of sexuality are associated with brown rots and

TABLE I

Pairings of 20 monosporous mycelia derived from a single sporophore of Polyporus leucospongia *Cooke and Harkness*

		A_1								A_2											
		1	4	7	8	12	14	19	20	3	6	9	10	11	15	16	17	18	21	22	25
A_1	1		−	−	−	−	−	−	−	+	+	+	+	+	+	+	+	+	+	+	+
	4	−		−	−	−	−	−	−	+	+	+	+	+	+	+	+	+	+	+	+
	7	−	−		−	−	−	−	−	+	+	+	+	+	+	+	+	+	+	+	+
	8	−	−	−		−	−	−	−	+	+	+	+	+	+	+	+	+	+	+	+
	12	−	−	−	−		−	−	−	+	+	+	+	+	+	+	+	+	+	+	+
	14	−	−	−	−	−		−	−	+	+	+	+	+	+	+	+	+	+	+	+
	19	−	−	−	−	−	−		−	+	+	+	+	+	+	+	+	+	+	+	+
	20	−	−	−	−	−	−	−		+	+	+	+	+	+	+	+	+	+	+	+
A_2	3	+	+	+	+	+	+	+	+		−	−	−	−	−	−	−	−	−	−	−
	6	+	+	+	+	+	+	+	+	−		−	−	−	−	−	−	−	−	−	−
	9	+	+	+	+	+	+	+	+	−	−		−	−	−	−	−	−	−	−	−
	10	+	+	+	+	+	+	+	+	−	−	−		−	−	−	−	−	−	−	−
	11	+	+	+	+	+	+	+	+	−	−	−	−		−	−	−	−	−	−	−
	15	+	+	+	+	+	+	+	+	−	−	−	−	−		−	−	−	−	−	−
	16	+	+	+	+	+	+	+	+	−	−	−	−	−	−		−	−	−	−	−
	17	+	+	+	+	+	+	+	+	−	−	−	−	−	−	−		−	−	−	−
	18	+	+	+	+	+	+	+	+	−	−	−	−	−	−	−	−		−	−	−
	21	+	+	+	+	+	+	+	+	−	−	−	−	−	−	−	−	−		−	−
	22	+	+	+	+	+	+	+	+	−	−	−	−	−	−	−	−	−	−		−
	25	+	+	+	+	+	+	+	+	−	−	−	−	−	−	−	−	−	−	−	

negative oxidase reactions, while the species showing tetrapolar type of sexuality cause white rots and give positive oxidase reactions.

It should be pointed out that *Polyporus squamosus* Huds. ex Fr. and *Polyporus tuberaster* Jacq. ex Fr., the lectotypes of the genus *Polyporus* Mich. ex Fr., possess tetrapolar type of sexuality[5]. As according to the modern mycologists[3, 4, 6] fungi showing different types of sexuality cannot be congeneric, the genus *Polyporus* is not the right place for *P. leucospongia*. Taxonomic revision on *P. leucospongia* is, therefore, necessary to evaluate its systematic position.

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TOXIC EFFECTS OF MERCURY ON THE GILLS OF A FRESHWATER TELEOST, *PUNTIUS SOPHORE* HAMILTON

IN recent years water pollution due to mercury has become serious throughout the world as evident by the tragedy of Minimata, in Japan[1]. There are very few comparable data regarding the toxicological responses of mercury compounds to fish[2–4]. The present study provides an information regarding the histopathologic effects of acute Hg (as $HgCl_2$) poisoning on the gills of fish.