TABLE I

Effect of different photoperiods on the vegetative growth and flowering of both ecotypes (OL-Obovate leaf and NL-Narrowly obovate leaf) of P. oleracea ; *values have been expressed on per plant basis*

Characters	Ecotype	Day	Photoperiod (hours)						
			4	6	8	10	12	14	16
Shoot length (cm) ..	OL	15	9·5	13·1	11·4	11·1	10·6	11·1	10·1
		30	12·6	18·9	15·4	14·0	13·0	..	13·1
	NL	15	1·5	1·9	1·8	2·2	3·1	..	3·4
		30	..	..	2·8	4·5	5·6	..	6·2
No. of nodes ..	OL	15	5·1	5·7	5·9	5·7	6·3	5·1	5·6
		30	5·5	6·1	6·0	5·8	6·5	..	5·8
	NL	15	3	3	3	3·4	4·2	..	4·4
		30	..	..	4	4·5	4·2	..	4·0
No. of branches ..	OL	15	0·0	5·6	5·6	5·5	8·1	5·1	5·6
		30	2·0	8·1	10·0	9·5	13·5	..	5·6
	NL	15	0	0	2·4	3·0	2·6	..	4·3
		30	..	..	3·5	4·7	5·4	..	5·6
No. of leaves ..	OL	15	14	32	31	33	53	39	32
		30	16	56	48	55	61	..	35
	NL	15	7	8	19	33	34	..	46
		30	..	..	17	52	53	..	62
No. of flowers ..	OL	15	1·6	7·4	10·6	16·2	25·2	13·5	10·8
		30	2·6	20·6	26·1	36·6	48·1	..	23·5
	NL	15	0	1·0	1·4	4·4	3·6	..	2·6
		30	..	..	4·0	14·2	10·2	..	10·4

(i) Due to certain unavoidable reasons the data of following photoperiods could not be collected on 30th day— 4-6 (NL) and 14 (OL); on both dates— 14 (NL).

leaves. In NL ecotype the number of branches and leaves—the latter during first 15 days only—tend to increase with increasing photoperiods. Later, except in 8 hours photoperiod, almost the same number of leaves are produced at photoperiods between 10–16 hours. Records made on 30th day on the leaf dimensions and internode length of NL ecotype show that with increasing photoperiods all these characters tend to increase. In OL ecotype flowering seems to be promoted as the photoperiod is increased to 12 hours ; further increase tends to decrease flowering. Same tend is observed in NL ecotype. where maximum flowering occurs at 10 hours photoperiod. A batch of plants kept under continuous illumination (24 hours photoperiod) flowered abundantly in case of OL ecotype, whereas only few flowers were produced in NL ecotype.

The data presented above indicate greater sensitivity of NL ecotype to photoperiod variations during vegetative phase. From the fact that these ecotypes flower at a wide range of photoperiods (4-24 hours) they may be considered to be day neutral. However both the ecotypes show differential quantitative response to photoperiod. Quantitative response has been defined by Salisbury (1963) to be the flowering behaviour of many species. which flower at any daylength, but are promoted by particular daylength. The photoperiod requirement of both ecotypes seems to be well adjusted within the range of natural photoperiod variation at Varanasi (9 hours in winter to 14 hours in summer). It may be mentioned that response of NL ecotype is similar to that of *Portulaca smallii* investigated by Cotter and Platt (1959) in U.S.A. In both while flowering is maximum at 10 hours photoperiod the vegetative growth is highest at 16 hours.

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1. Cotter, D. J. and Platt, R. B , *Ecology*, 1959, **40**, 651.
2. Salisbury, F. B., *The Flowering Process*, Pergamon Press, 1963.

A NEW SPECIES OF *ROSELLINIA* (XYLARIALES) FROM INDIA

DURING the course of his recent collection tour of the Areca plantations at Sagar (Mysore State) the writer collected an interesting Xylariaceous fungus growing on dried twigs of *Syzygium cumini* (L.) Skeels. The infection spots were in the form of dark erumpent fruiting structures. Critical exami-

TABLE I

Comparison between species of Rosellinia

Species	Fertile stroma	Perithecia	Asci	Ascospores	Reference
Rosellinia aquila (Fr.) de Not (Type)	0·5–0·9 × 0·6–0·8 mm	300–500 μ in diam	150–180 × 9–10 μ	15–22 × 6–8 μ	Arx and Mueller, 1954
Rosellinia sp. (Sagar collection)	1–2 × 0·5–1·5 mm	816–1496 μ in diam	190–250·8 × 6–8 μ	30·5–38·0 × 5–7 μ	Writer

nation of the gross morphological characters of the fruiting bodies revealed its identity as a species of *Rosellinia* de Not. (Xylariales).

A detailed study of the writer's collection of *Rosellinia* revealed significant differences in morphology as well as dimensions of fruiting structures-like stroma, perithecia, asci and ascospores, from the type species, besides being collected on an hitherto unreported substratum (Table I), on the basis of which the writer's collection is presented here as new to science.

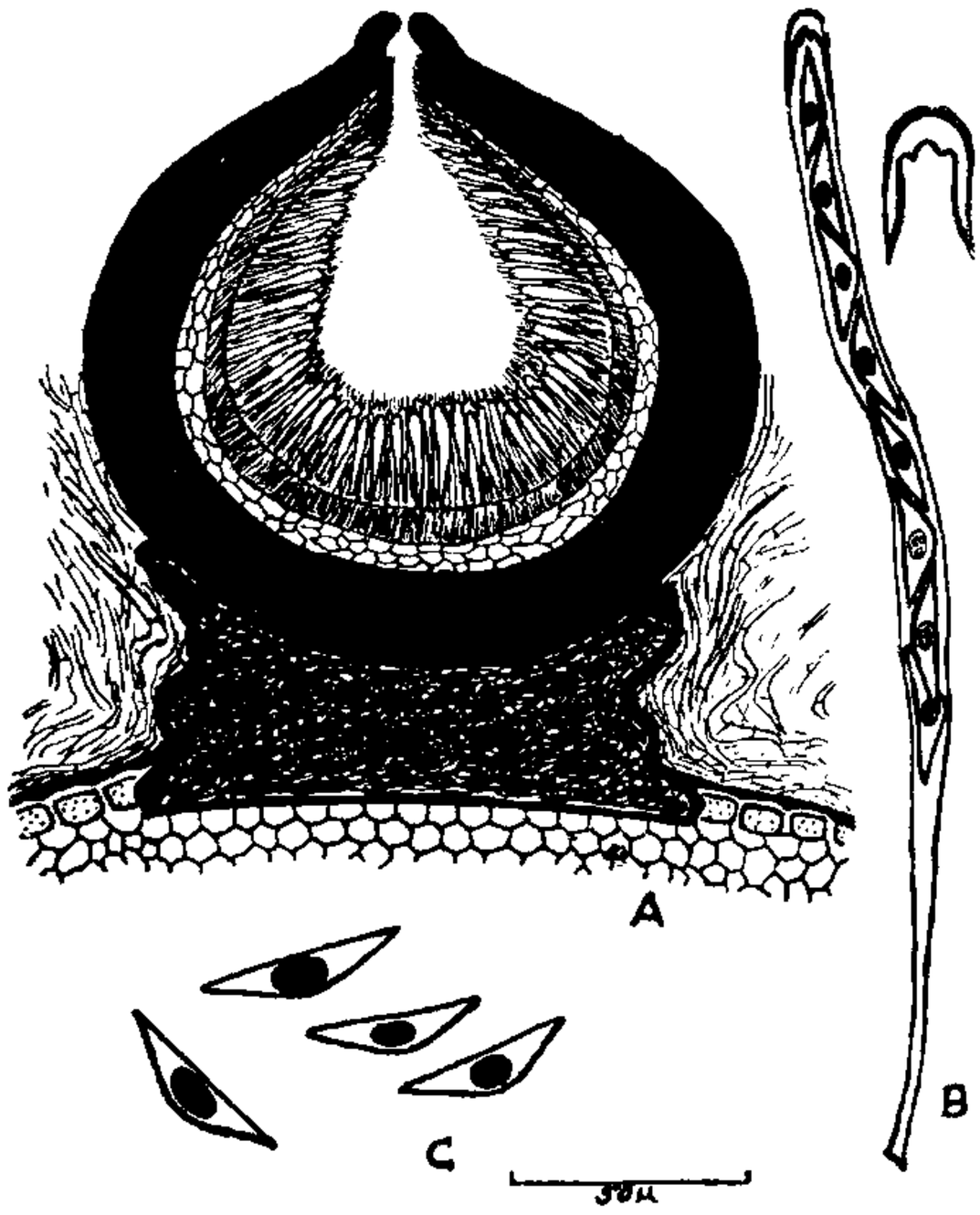

FIG. 1. A, Section of a Perithecium. B, Ascus with ascospores. C, Ascospores.

Rosellinia petrakii SP. NOV.

Stromata nigra, erumpentia, sub-sphaerica vel globosa, dispersa vel gregaria, 1–2 × 0·5–1·5 mm. Perithecia sub-sphaerica, vel globoidea, nigra, ostiolata, rostellata, 816–1496 μ in diam. Asci cylindracei vel clavatae, sub-hyalinae, pedicellatae longae, unitunicatae, apicem globosa, octosporae, 190–250·8 × 6–8 μ. Ascosporae monostichae, ellipsoideae vel lenticulares, continuae, pallide-brunneae, unicellulariae, 30·5–38·0 × 5–7 μ. Paraphyses et perithecia numerosae, filiformes, hyalinae.

In culmis emortius *Syzygium cumini* (L.) Skeels, (F. Myrtaceae). Legit. D. V. N. (29–9–1971) ad Sagar (Mysore State), M.A.C.S. Mycol. Herb Sub-Numero 1623 (Typus).

The species has been named after Dr. F. Petrak (Wien, Austria), in recognition of his outstanding contributions to Systematic Mycology.

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1. Arx, von, J. A. and Mueller, E., *Die Gattungen der Amerosporen Pyrenomyceten*, K. B. Buchler & Co., BERN., 1954, p. 323.
2. de Notoris, *Giorn. Bot. Ital.*, 1844, 1, 334 (Original not seen).

PUCCINIA DEODIKARII SP. NOV., FROM INDIA (UREDINALES)

DURING the course of his mycological survey, the writer collected leaves of *Ixora nigricans* Br. showing severe folliculous infection by a rust fungus belonging to the genus *Puccinia* from Trichatkulam, Kerala, during the summer of 1969. A detailed and critical survey of literature revealed that no species of *Puccinia* had so far been reported on the host genus. It is, therefore, proposed to accommodate this fungus in a new taxon as *Puccinia deodikarii*.

Puccinia deodikarii SP. NOV.

Infectionis maculae hypophyli, brunneae, circularis vel irregulares, dispersae, erumpentis, 2 mm vel 15 mm.

Pycnia, aecia atque uredia ignota. Telia subepidermalis in genesis, erumpentis, stroma evolvo. Teliosporis uniseptalis raro unicellularibus *et* tricellularis, brunneae, ovatis vel oblongis, germporos