dentate along margins. Sepals 1 to 1.25 mm long, subacute; laterals slightly broader than dorsal sepal. Petals 1.25 to 1.5 mm long, linear, minutely ciliate along margins. Lip 1.5 to 2 mm across, suborbicular in outline, 3-lobed; lobes minutely toothed along margins, papillate; midlobe bilobulate; lobules suboblong, rounded at apex; lateral lobes suborbicular. Column short. Pollinia 4, in 2 pairs, caudicle absent. Capsule 3 to 4 mm long, ovoid; fruiting pedicel distinct (figures 1 to 5).

Holotype K. R. Keshava Murthy & Party 4233A and *Isotypes* 4233 B–D, collected from the forests along Bhagamandala to Mercara on 8 August, 1983, at an altitude of 1200 m, in flowers and fruits are deposited at the Herbarium of the Regional Research Centre, Bangalore (RRCBI).

This species is named after late Sri T. K. Ranganna, father of the first author.

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INHIBITORY EFFECT OF LIGHT ON AFLATOXIN B_1 FORMATION IN COPRA

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SEVERAL studies for finding resistant varieties for the accumulation of aflatoxins[1,2], stopping the growth of the fungus and subsequent toxin production by certain chemicals[3,4] have not yielded the desired results[1,5,6]. Barring a single report[7], there is little information on the preventive nature of light on aflatoxin B_1 formation. Therefore, an attempt has been made to study the inhibitory effect of light on toxin production in copra, as this substrate is considered to be one of the food products that has a high risk for aflatoxin formation[8].

Five sets each of 100 g of sterilized copra samples inoculated each with 10 ml of inoculum (containing 2×10^3 spores per ml) of *Aspergillus flavus* NRRL 13130 A (this strain produced only aflatoxin B_1 on copra) were placed in sterilized petri dishes with a thickness of 1 cm and incubated for four weeks in sunlight, diffuse light (samples were placed inside a room, close to a window where no direct sunlight falls) and electric light (samples were placed under two bulbs of 100 watts at a distance of 30 cm). Samples incubated in total darkness served as controls. Weekly estimations were done for toxin contents immediately after incubation by employing standard methods[9,10].

Table 1 *Effect of light on aflatoxin B_1 formation in copra*

Incubation period (weeks)	Aflatoxin levels* (μg/kg) detected in copra samples after incubation				
	Type of light	Total darkness (control)	Diffuse light	Electric light	Sunlight
	Quantity** of light (lux)	—	1000	500	2400
1		192.30	60.00	150.00	—
2		300.00	75.50	166.66	—
3		190.07	164.50	180.00	—
4		500.00	112.50	63.50	—

* Mean of 5 replicates; ** Mean quantity of light measured at various intervals during incubation period.

In the control sets of copra (samples incubated in total darkness, aflatoxin B_1 was produced in the range of 190.07 to 500 μg/kg in the four weeks of incubation period, However, only 60 to 164.5 and 63.5 to 180 μg/kg of toxin was observed in the samples stored in diffuse and electric lights respectively. None of the samples incubated in sunlight showed the presence of aflatoxin B_1 during the entire incubation period (table 1) which clearly indicates that sunlight inhibited the toxin formation totally.

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MICROSPOROGENESIS AND DEVELOPMENT OF MALE GAMETOPHYTE IN *ANISOMELES INDICA* (LINN.) O. KZE.

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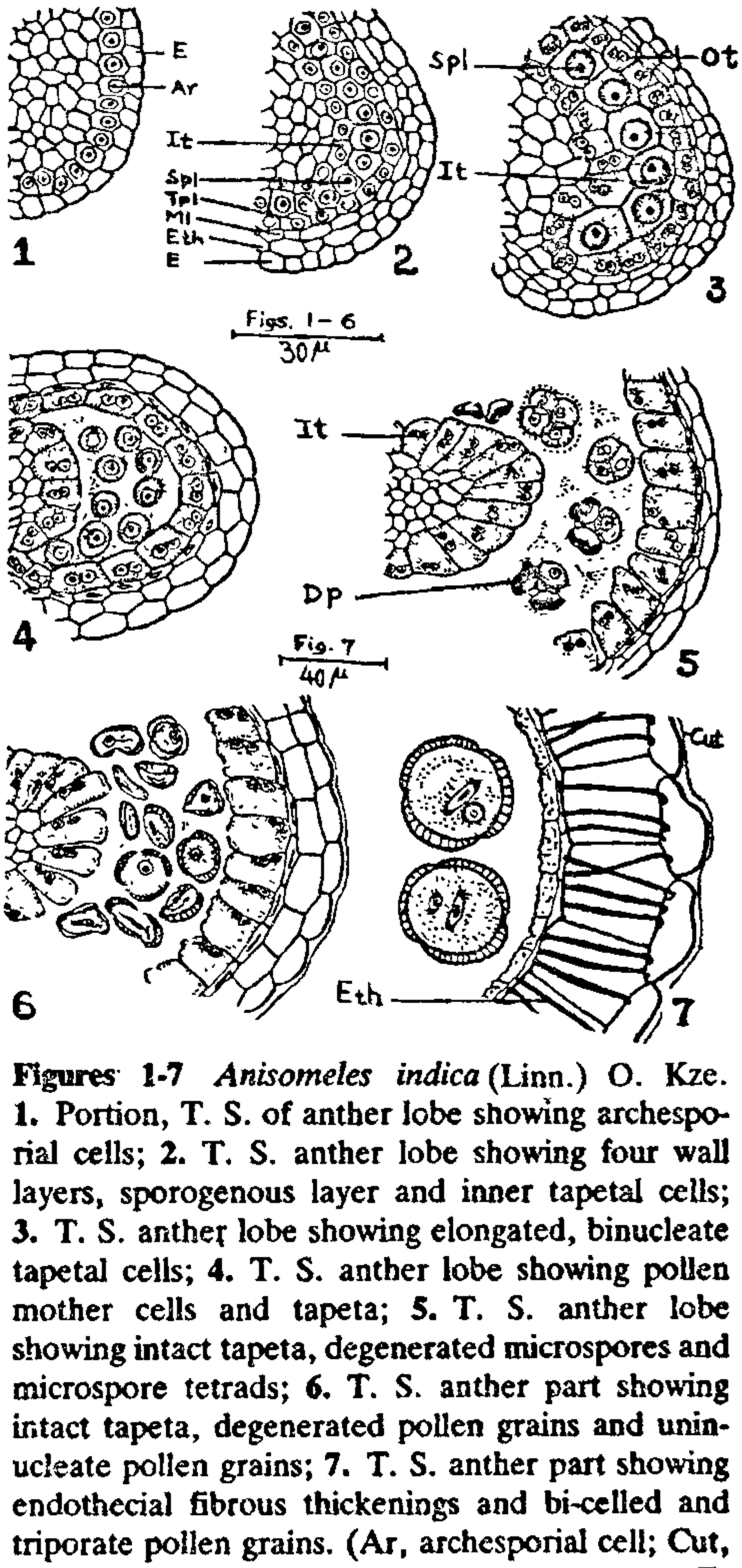
ANISOMELES INDICA belongs to the sub-tribe Lamieae and tribe Stachydeae of Lamiaceae. Megasporogenesis and development of female gametophyte, endosperm, embryo, seed and fruit have been reported in this taxon[1,2]. The present note deals with the microsporogenesis and development of male gametophyte.

Floral buds and flowers in different stages of development were collected from Mount Abu and fixed in FAA. Sections were cut at 4-10 μ following standard techniques and stained with the combinations of Heidenhain's ironalum haematoxylin and safranin-fast green.

The anther is dithecus. In transection, the young anther is rounded in outline and comprises a homogenous mass of cells bound by a well-defined epidermis. It soon reveals a four-lobed appearance and in each lobe some hypodermal cells become more prominent than the rest because of their large size, radial elongation and conspicuous nuclei (figure 1). These cells undergo periclinal division and produce an outer parietal layer towards the epidermis and an inner primary sporogenous layer towards the interior of the anther. Periclinal division in the primary parietal layer results in the formation of two secondary parietal layers. The outer secondary parietal layer divides again to cut outer endothecium and inner middle layer, while the inner one functions directly as the tapetum. Thus the anther wall now consists of four layers viz. epidermis, endothecium, middle layer and tapetum (figure 2). At this stage, the connective cells lying just inner to the primary sporogenous layer diffe-



Figures 1-7 *Anisomeles indica* (Linn.) O. Kze. **1.** Portion, T. S. of anther lobe showing archesporial cells; **2.** T. S. anther lobe showing four wall layers, sporogenous layer and inner tapetal cells; **3.** T. S. anther lobe showing elongated, binucleate tapetal cells; **4.** T. S. anther lobe showing pollen mother cells and tapeta; **5.** T. S. anther lobe showing intact tapeta, degenerated microspores and microspore tetrads; **6.** T. S. anther part showing intact tapeta, degenerated pollen grains and uninucleate pollen grains; **7.** T. S. anther part showing endothecial fibrous thickenings and bi-celled and triporate pollen grains. (Ar, archesporial cell; Cut, cuticle; Dm, degenerated microspores; E, epidermis; Eth, endothecium; It, inner tapetum; Ml, Middle layer; Ot, outer tapetum; Spl, sporogenous layer).