Figures 1 and 2. Nucleus of the microspores stained black by acetic acid-iron alum-haematoxylin. 1. in Oryza sativa L. sp. indica (× 850), 2. in Vigna umbellata (× 800).

BOD incubator maintained at 10 + 1º, until use. The anthers from fresh and cold-treated panicles were squashed in a drop of acetic acid-iron alum-haematoxylin stain. This was obtained by dissolving chloral hydrate (40%, wt./vol.) in a stock solution which was prepared by mixing 4 g haematoxylin and 1 g iron alum in 100 ml of 45% acetic acid.

Nucleus appeared deep grey to black coloured against colourless cytoplasm. Uninucleate (figure 1) as well as binucleate microspores were distinct. Using the same stain, microspore nucleus of rice bean (Vigna umbellata) was also seen clearly despite the presence of ornamentation of the wall (figure 2). However, when acetocarmine was employed microspore nuclei were neither visible in rice nor in rice bean even though various concentrations were used.

Iron alum has been widely used as a mordant in chromosome studies. In the present study it is presumably adsorbed onto the nuclear material on which haematin gets deposited thus staining the nucleus distinctly. Haematin, after ferric mordanting, is known to possess a strong tendency to accumulate around densely stained material.

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AMANITA FLAVOFLOCCOSA—AN ADDITION TO INDIAN AGARIC FLORA

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AMANITA FLAVOFLOCCOSA was originally described from Japan by Nagasawa and Hongo. This is a very common species occurring in and around Madras and has been collected on several occasions by us. A description of the fungus is given below and this is the first report of this species outside Japan. The colour terminology used is that of Kornerup and Wanscher.


Pileus 3.5–11 cm in diam., conical becoming plano-convex; surface light yellow (4A5), orange (6B6)
with age, floccose squamulose, dry; margin non-
striate, often incised and with detachable floccons. 
Lamelleae free, white to pastel yellow (3A4), broad, 
crowded, with lamelleae of 3 lengths. Stipe central, 
8–20×0.7–2 cm, cylindrical with clavate base, 
solid, concolorous with pileus surface, floccose 
squamulose beneath the annulus, glabrous above; 
annulus superior, hanging, almost persistant. Spore 
print white. Basidiospores globose to subglobose, 
8–10×8–9 μm, Q = 1–1.1, hyaline, amyloid, thin-
walled, with refractive guttules. Basidia clavate, 
30–50×10–13 μm, often with basal clamps, tetrasporic; sterigmata 3–5 μm long. Cystidia absent. Gill 
trama bilateral, hyphae 2–8 μm in diameter. Context 
0.5–1 cm thick, white, hyphae 3–15 μm in diameter. 
Pileus surface an epicutis, hyphae 3– 
10 μm in diameter. Velar squamules consisting of 
brood elongate, fusoid, detersile elements, 75– 
200×10–27 μm, pigmented.

On ground, gregarious, in Maduravoyal Field 
Laboratory, University of Madras, Tamil Nadu, 
8-8-1983. Herb. MUBL No. 2927.

On ground, in group, A.C. College Campus, 

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2. Kornerup, A. and Wanscher, J. H., Methuen 
Handbook of Colour, Methuen and Co. Ltd., 

ELECTROPHORETIC STUDIES ON SEED 
PROTEIN PROFILES OF DIPLOID AND 
AUTO-TETRAPLOID GREEN-GRAM (VIGNA 
RADIATA (L.) WILCZEK)

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SEED protein electrophoresis is now used as an 
additional tool for assessing the species relationships 
and for supplementing the evidence obtained 
through comparative morphology, breeding experi-
ments and cytogenetic analysis of interspecific 
hybrids. In various groups of plants the seed 
protein profile obtained by electrophoresis is highly 
stable and species specific. Electrophoretic studies 
on different species of legume seeds indicate that 
relative proportion of different storage proteins 
varied considerably in different species. Hitherto 
there have been no studies on the seed protein 
electrophoretic patterns of diploid and tetraploid 
cultivars of Vigna radiata and the present paper 
describes the same.

The tetraploid used in the present study was 
obtained from 0.3% colchicine-treated population of 
green-gram cultivar Pusa 105. Seed proteins were 
extracted in 2 ml of 0.5% SDS and 1 mM Tris (1:1) 
and incubated for 30 min at 70°C. This mixture was 
used as protein sample. Electrophoresis was per-
fomed according to the method of Weber and 
Osborn. The gels were stained with 0.125% 
Coomassie brilliant blue (R 250) and destained with 
7% acetic acid. The migration velocity of an 
electrophoretic band is expressed as Rg value. The 
gels were scanned on a gel scanner (Schimadzu-UV 
240) at 630 nm.

The diploid and tetraploid showed bands with an 
Rg of 0.8, 1.3, 1.8, 2.7, 2.9, 3.1, 3.5, 3.6, 4.3, 4.7, 5, 
5.3, 5.5, 5.7 and 6.1. In general both the diploid and 
tetraploid exhibited similar banding pattern (similar-
ity index value = 92.86) except a distinct band