

claw is not angulated, and the longer claw of the middle foot has no cleft.

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A NEW RECORD OF SEED SETTING IN SCENTED GERANIUM (*PELARGONIUM GRAVEOLENS* L. HERIT.) FROM INDIA

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TWO viable seed-setting strains have been identified in scented geranium at the Indian Institute of Horticultural Research for the first time in India and are described here.

Pelargonium graveolens L. Herit, a native of Cape Province, South Africa, is the source of geranium oil, which is highly prized in the perfumery industry. The plant was first introduced in Shevroy hills of Tamil Nadu and is presently cultivated on a commercial scale in the hills and plains of South India. Though the species flowers profusely, the flowers are sterile and so far seed set has not been reported in India¹. Due to inherent sexual sterility, the plant is propagated vegetatively by stem cuttings and hence lacks sufficient genetic variability, limiting

the development of genotypes superior in oil yield and quality. As sexual reproduction in such species would create genetic variation through recombination, the germplasm maintained at IIHR, Bangalore (980 m MSL, 13°58'N and 78°E) was screened for fertile seed-bearing genotypes. In two clonal lines, viz. PG-7 (source: HRS, Kodaikanal) and Algerian-4n (IIHR selection), plants with flowers bearing fertile anthers were observed in April/May 1988. Frequency of fertile flowers was 2–3% per plant. Fertile anthers, 2 to 4 in number (out of a total of 7 anthers) were of bright orange colour, plumpy, and were borne on extended filaments (figure 1). This is in contrast to the pale yellow, shrivelled anthers borne on short filaments generally found in the sterile flowers. The anthers dehisced normally, releasing abundant, orange-coloured and stainable² pollen. Selfed flowers produced seeds. This is the first



Figure 1.

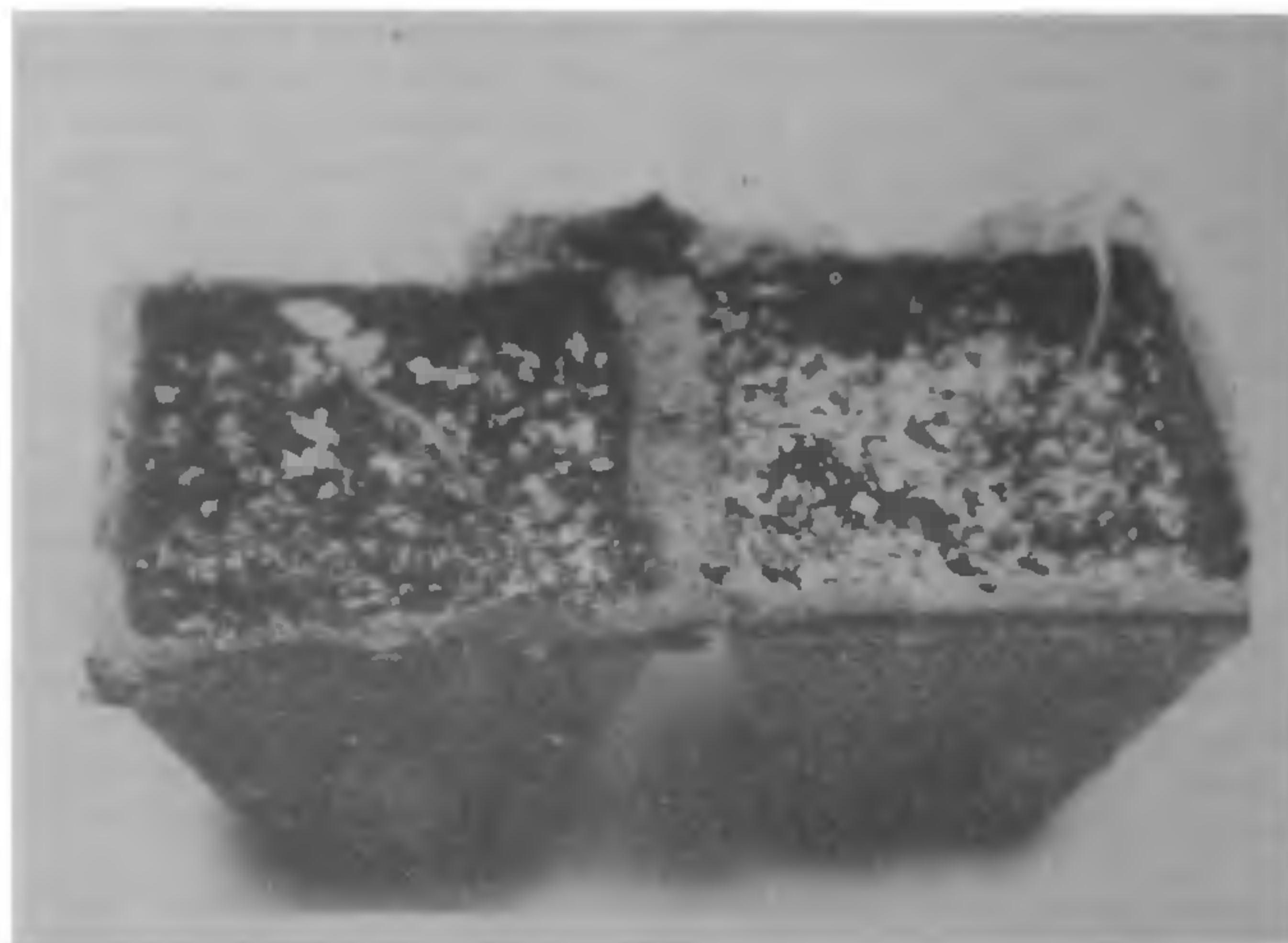


Figure 2.

record of seed set in scented geranium from India. Mature seeds oval in shape and dark brown to black in colour could be germinated in petri plates incubated in a seed germinator at $25 \pm 1^\circ\text{C}$ for 8–10 days. Seeds collected in June 1988, packed in polythene bags, and stored in a domestic refrigerator at 4°C remained viable for one year. Fresh mature seeds collected in June 1989 were also kept for germination, along with stored seeds. Good germination among fresh seeds was recorded, indicating that there is no seed dormancy. Seedlings from fresh and stored seeds were propagated in 4 cm pots containing vermiculite (figure 2) and surface-irrigated daily with a nutrient solution³. Initial growth of the seedlings was slow. After 45 days, the well established seedlings were transferred to sand + FYM mixture in large pots. Further studies on these plants are in progress.

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STAINING OF THE NEUROSECRETORY CELLS AND MATERIAL BY EISEN HAEMATOXYLINE

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WEYER¹ was the first to describe neurosecretory cells in insects more than fifty years ago. The study of insect neurosecretion progressed slowly between 1930 and 1950. However, it gained momentum after the work of Gomori² and Gabe³. In the last twenty years several histochemical, electron-microscopic, radioautographic, immunohistochemical and other experimental methods were introduced^{4–7}. Recently, Panov⁸ reviewed different staining procedures used by different workers. However, so far there is no report of the use of Eisen haematoxyline for staining neurosecretory cells and material in insects. In this note it is shown that Eisen haematoxyline can be used as an alternative stain for neurosecretory cells and material in insects.

Larvae of *Galleria melonella* and adults of *Dysdercus cingulatus* were dissected in insect Ringer.