

Sculpture and Arrangement of the Seed Epidermis in *Portulaca*

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Seeds of *Portulaca* have drawn much attention for their importance in distinguishing species. They are distinguished by the sculpture and arrangement of the epidermal cells of the testa. The way in which their stellulate-tessellate epidermal testa cells fit together is unique. A considerable variation in seed morphology was detected and a comparison has been made among taxa in the study. The cells varied from being flat to orbicular, dome-shaped to elliptic, tuberculous to spinous, blunt to pointed stallulate tips in outlines, and smooth walled to granulous in their surfaces. Smooth and shining testa cells with flat surfaces were found in group A. Their testa had stellulate cells with several lobes having somewhat pointed tips. Tubercles are mostly found on the marginal cells. The most interesting variation of testa structure was noticed in the species having tuberculated stellulate-tessellate cells over the entire surface. Spines approximately 40-80 μm in length protruded from the center of each epidermal cells. Seeds in group B exhibited mostly tubercled, and these tubercles were especially prominent at the margins of the seeds. Most features were fairly consistent in a given taxa, but intergradation of testa were also encountered in some cases. The need for a full study of samples from the various region for these taxa has been stongly suggested.