

micropyle

vegetative

Generative cell

pollen tube. Pollen tube grows through the tissues of the stigma and style and reaches the ovary (Figure 2.12b, c). You would recall that in some plants, pollen grains are shed at two-celled condition (a _____ cell and a generative cell). In such plants, the _____ divides and forms the two male gametes during the growth of pollen tube in the stigma. In plants which shed pollen in the three-celled condition, pollen tubes carry the two male gametes from the beginning. Pollen tube, after reaching the ovary, enters the ovule through the _____ and then enters one of the synergids through the filiform apparatus (Figure 2.12d, e). Many recent studies have shown that _____ present at the micropylar part of the synergids guides the entry of pollen tube. All these events—from pollen deposition on the stigma until pollen tubes enter the ovule—are together referred to as _____ interaction. As pointed out earlier, pollen-pistil interaction is a dynamic process involving pollen recognition followed by promotion or inhibition of the pollen. The knowledge gained in this area would help the _____ in manipulating pollen-pistil interaction, even in incompatible pollinations, to get desired hybrids.

Pollen pistil

Plant breeders

Filiform apparatus