It is noteworthy that high reflectance of radiation does not always accompany special wax layers but can also arise from discontinuity of refractive index at sub-epidermal air spaces which are present along the entire leaf lamina of the *argenteum* mutant of *P. sativum* (Hoch *et al.*, 1980), and also as patches in leaves from blessed milk-thistle (*Silybum marianum*) and zucchini (*Cucurbita pepo* ssp. *pepo* convar. *giromontiina*).

In many fruits, UV photography revealed significant reflection of UV radiation which is considered to be a foraging signal for animals perceiving UV radiation and thereby assisting in seed dispersal (Burkhard, 1982; Willson and Whelan, 1989). In the latter work, a survey of fruits from 53 species showed that high UV reflectance values were frequently associated with glaucous surfaces. These high UV reflectance values, ranging between 10 and 30%, were reduced to 10% or less when the wax layer was removed. Similarly, recent studies with bilberries (*Vaccinium myrtillus*) by Honkavaara *et al.* (2002, 2004) revealed UV reflectance values of about 10%, when the berries were covered with a waxy bloom, decreasing to 5% after wax removal. High UV reflection by fruits is not always associated with a glaucous surface: Altshuler (2001) found that some tropical fruits, not covered by wax bloom, still exhibited UV reflectance values higher than 20%.

Trichomes. Trichomes are cellular protuberances on plant surfaces of relatively high height to width ratios and show various degrees of complexity (Wagner *et al.*, 2004). In some plant species, leaf trichomes reflect radiation efficiently and, thus, reduce radiation intensities inside the leaf. Reflection of visible radiation by trichomes was thoroughly studied in the drought-deciduous brittlebush (*Encelia farinosa*). With trichome layers isolated from thick pubescent leaves, Ehleringer and Björkman (1978) measured reflectance values of around 70% in the green and red wavelength regions. At shorter wavelengths, reflectance dropped to 50% but absorptance increased in parallel; hence, trichomes of *E. farinosa* are highly reflective but their absorption may contribute to light screening in the blue region. Removal of leaf hairs increased leaf absorptance in the visible region from about 40 to 80% and produced an absorptance spectrum similar to non-pubescent leaves of the closely related *Encelica californica*. Trichomes may also be involved in UV screening as the densely pubescent leaves of *Argyroxiphium sandwicense* reflected about 40% of UV radiation (Robberecht *et al.*, 1980).

Efficient reflection of radiation, however, is not a universal feature of trichomes. Isolated trichome layers from two *Olea* species showed reflectance values below 5% in the UV and below 20% in the visible (Karabourniotis *et al.*, 1992). The pubescent *Espelatia schulzii* leaves reflected less than 5% of UV-B radiation (Robberecht *et al.*, 1980). Leaves of 23 trichome-covered plant species always reflected less than 15% of radiation at 330 nm and less than 25% at 680 nm (Holmes and Keiller, 2002). Reflectance at 680 nm did not exceed 20% in pubescent upper leaf surfaces of some Bromeliaceae and removal of trichomes caused only minor reductions in reflectance (Pierce *et al.*, 2001).