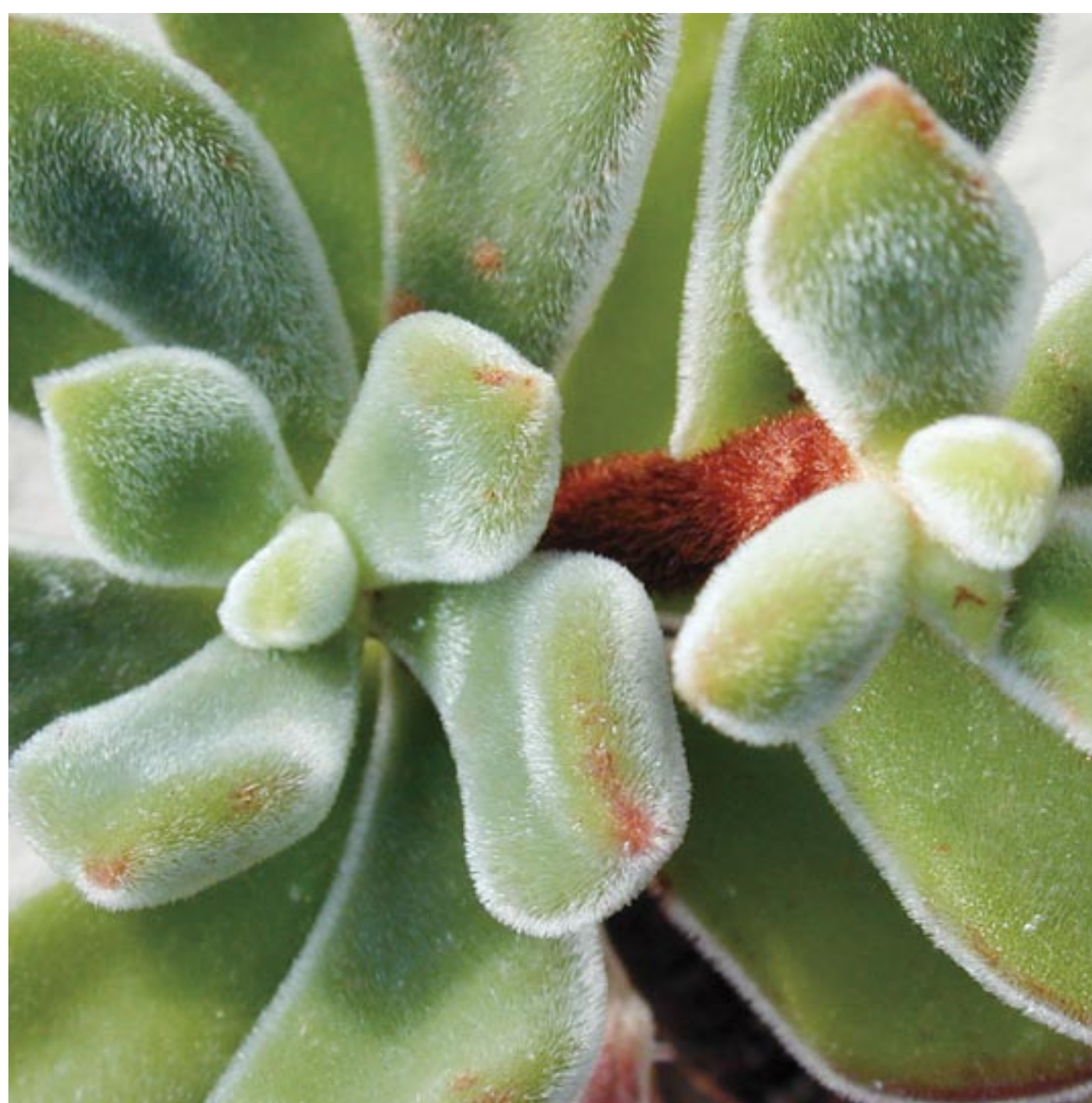


# Sunbathers

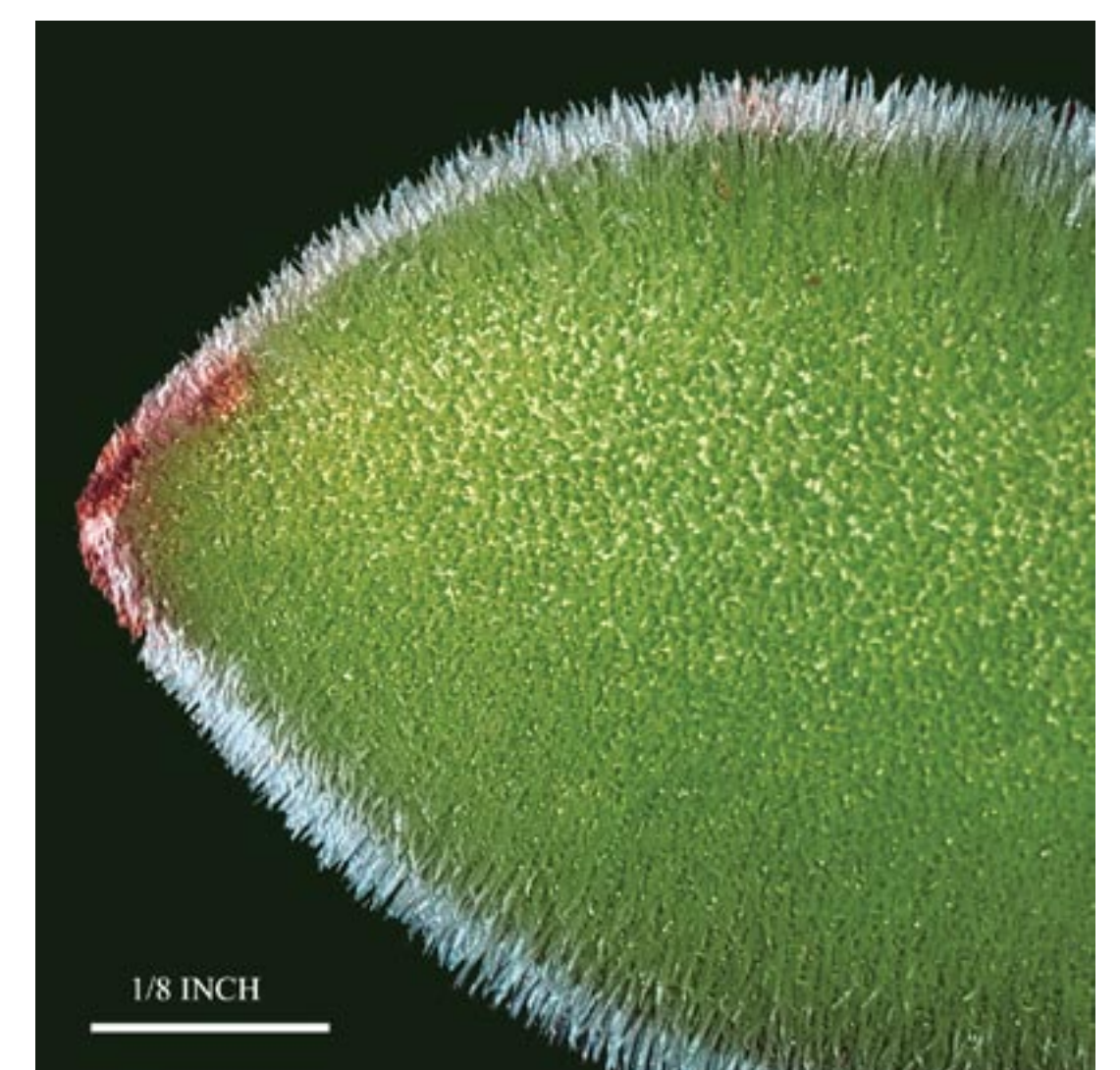


**Desert plants** are adapted to living in intense heat and sun. While sunlight is needed for plants to make their own food (carbohydrate), the powerful sun can damage a plant's chlorophyll or DNA. Many plants have adapted by deflecting or blocking sunlight, while a few orient their leaves away from direct sunlight.



Hairy leaves of Mexican plush plant

In climates with intense sunlight, many species have adapted by developing dense leaf hairs that block out some light. This **Mexican plush plant**, *Echeveria pulvinata*, glimmers as countless epidermal hairs deflect light away from its leaf surface.



Leaf hairs of Mexican plush plant



Peruvian old man cactus

Several cacti, affectionately called old men cacti, have taken their "hair" to new limits. Waves of silvery hairs, which are highly modified leaves, give these plants an amusing adornment that blocks some of the intense sun. This one is the **Peruvian old man cactus**, *Espostoa lanata*.



Vertical leaf senecio

The leaf orientation of the **vertical leaf senecio**, *Senecio crassissimus*, is an adaptation that minimizes direct sunlight from striking the leaf surface. The indirect light they receive is more than adequate for growth. While protected from the sun's damaging rays, the leaves stay cooler in the hot Madagascar sun.