

# **Physical Advantages of a Biodome**

## **Aesthetics of Free Span**

A Biodome provides the most natural outdoor environment achieved in a structure because of its free span construction. There are no internal column roof supports distracting the eye to remind the viewer they are in a building. The clear walls go almost straight up, out of sight, out of mind. The 75' apex provides plenty of height for the forest canopy.

The circular interior of the dome is conducive to the natural contouring layout. Continuously curving paths give an outdoor quality with the plants hedging straight look through lines of sight. This gives a feeling of being surrounded by nature and embraced in your own space, a quality of larger outdoor environments.

## **Sunlight**

A Biodome catches more light than a standard greenhouse. Its larger panels and more widely spaced supports screen out less light than a conventional, small-paned greenhouse. The overall gain in light transmitted exceeds 20%, important during the low-light season for healthy growth of tropical plants. More sunlight also means more solar heat gain in winter, and therefore lower space heating requirements.

## **Stability and Durability**

A hemispheric dome has maximum structural stability because there are no corners or edges where stresses occur and the structure's weight is evenly distributed pressing directly down, eliminating any spreading forces on the foundation. The Biodome is designed to be built with double strength glass in an aluminum structure fastened together by non-corroding stainless steel bolts. These materials are very durable and will minimize operation and maintenance costs.