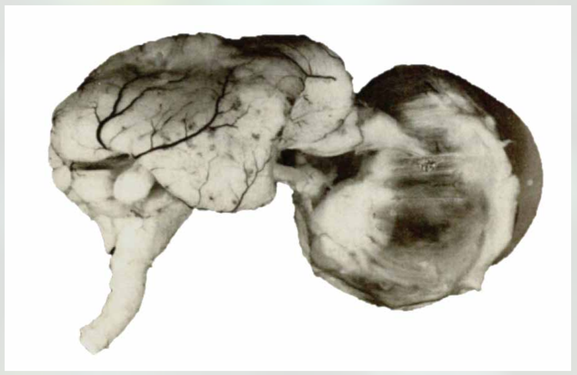
Tarsier Goggles

a look at prosimian perception

EXTREME SEER

Tarsius bancanus is a nocturnal primate with enormous eyes, both in absolute size and in proportion to the size of the fist-sized animal. This might be an adaptation to vision in dim light by letting more light into the eye. Through experiential design, we have developed a tool that could be useful not only in education and science communication but also in making the user appreciate the way a highly adapted primate might experiences the world.



Left: The brain and enormous eye of *Tarsius bancanus* are almost identifical in volume. *Right*: The tarsier's eyes demand large orbits in the skull. In fact, much of the eyes protrude outside of the skull and are held in the head by muscles.

ECOLOGY

The Bornean tarsier lives in the understory of lowland dipterocarp rainforests of Borneo, Sumatra, and the surrounding islands. They are entirely carnivorous and hunt mostly insects and even small birds, lizards, frogs, and bats. Although they are competitive predators, they are also prey to some snakes, lizards, and raptors.

Left: Lowland dipterocarp forest in Borneo. Tarsiers cling to small branches and leap through their environment. *Right*: Tarsiers are entirely carnivorous and hunt insects such as beetles and grasshoppers and even small birds and reptiles.

VISUAL ADAPTATIONS

Large eyes are thought to:

- increase image **brightness**
- change **depth of field**
- expand **peripheral vision**

The Bornean tarsier is also red-green color blind. By toggling between tarsier and human our project peers into the perspective of a species with such extreme optical adaptations.

Left: What a human would see in low-light conditions. *Right*: A tarsier in the same conditions might see a brighter image with a wider field of view, progressive blurring, and red-green color blindness.