Bio 348 Human Anatomy & Physiology
Western Washington University

Beef Eye Dissection Instructions (See also page 91 in your lab packet)

(Note: Please complete the pre-lab assignment for the Special Senses on pages 89 & 90 in your lab packet, with special attention to the features listed in bold face type.)

1. Examine the posterior and lateral surfaces of the eye. Identify the stump of the optic nerve and traces of the extrinsic eye muscles where they insert on the sclera.

2. On the anterior surface, locate the cornea and pupil (if visible).
3. Hold the eyeball firmly and make a small incision into the tough scleroid coat with a sharp scalpel about one-quarter of an inch away from the edge of the cornea, making sure not to squeeze the fluid out of the eye. Note how difficult it is to cut the sclera.

4. Insert the blade of sharp scissors into the incision, and cut all the way around the wall of the eye.

5. Gently lift off the front portion of the eye and place it with its inner surface facing up on the dissecting tray.

(see the figure on the next page)
6. The **vitreous humor** helps to maintain the shape of the eyeball in the **posterior cavity**.

*Is there fluid in the anterior cavity? How is it made?*

7. Locate the thin, pale **retina** at the back of the eye. It separates easily from the pigmented choroid coat, except for its attachment at the origin of the optic nerve at the **optic disk**.

*Why is the optic disk called the **blind spot**? What other structures originate at this location?*

8. The **lens** usually remains attached to the anterior portion of the eye, surrounded by the black **ciliary body** of the **choroid** layer. The **iris** controls the size of the pupil.

9. The ciliary body consists of **ciliary processes** and **ciliary muscles**, controlling tension on the lens via **suspensory ligaments**.

10. Locate the **fovea centralis**, a slight depression in the retina and underlying choroid, directly behind the pupil on the back wall of the eye. *Why this is the area of best vision?*