UNIT 3.  DISSECTION:  DEEP BACK MUSCLES, SUBOCCIPITAL TRIANGLE
AND CRANIOVERTBRAL JOINTS

STRUCTURES TO IDENTIFY:
Iliocostalis  Rectus capitis posterior major
Longissimus  Rectus capitis posterior minor
Spinalis  Obliquus capitis inferior
Splenius capitis  Obliquus capitis superior
Splenius cervicis  Vertebral artery
Semispinalis  Suboccipital nerve (dorsal primary ramus C₁)
Multifidus
Rotators

DISSECTION INSTRUCTIONS:

1. If not done, reflect the trapezius, rhomboideous and latissimus dorsi on both sides. Do NOT cut the levator scapulae.

2. Clean the splenius muscle (N. plates 174, 175; G. plate 4.33). The splenius muscles originates from the ligamentum nuchae, the spine of C₇, and the spines of the upper 5 or 6 thoracic vertebrae. The upper part of the muscle, splenius capitis, insterts into the mastoid process and the lateral parts of the superior nuchal line. The lower part, splenius cervicis, inserts into the transverse tubercles of the transverse processes of the upper 2 or 3 cervical vertebrae. Be sure to see that as the muscle runs upward and laterally it separates into two parts.

3. Cut the thoracolumbar fascia on both sides and expose both erector spinae muscles (N. plate 175; G. plate 4.33). This muscle mass is the thickest in the lower thoracic and lumbar regions, where it is enclosed between the two lamellae (layers) of the thoracolumbar fascia. The posterior lamella has been cut. It is attached medially to the lumbar and sacral spines and stretches laterally across the external surface of the erector spinae to become continuous with the fascial sheaths of the anterior abdominal wall. The anterior lamella is then continuous with the posterior lamella. Medially the anterior lamella attaches to the transverse processes of the lower thoracic and lumbar vertebrae (N. plate 179; G. plate 4.34). Superiorly, it gradually thins out, and in the upper thoracic region it is hard to recognize as a distinct membranous layer.

4. Identify the three parts of the erector spinae muscle (Iliocostalis, Longissimus, and Spinalis). (N. plate 175; G. plate 4.33; p.328).

5. Completely cut out the erector spinae muscle on one side to expose the transversospinalis muscles.
6. Identify **semispinalis, multifidus, and rotators**. The upper portion of semispinalis becomes **semispinalis capitis**, be sure to identify this (N. plates 175, 176; G. plate 4.35; p.328).

7. Cut the insertion of semispinalis capitis and then use the handle of the forceps to blunt dissect and retract the muscle laterally. Identify the course of the **greater occipital nerve** as it passes through the semispinalis capitis. Follow the greater occipital nerve proximal toward its origin; you will find that it winds directly around the inferior border of the **inferior oblique** muscle (N. plate 178; G. plates 4.38, 4.39; p.332). This will aid in identifying the small suboccipital triangle, which is made up of the **inferior** and **superior oblique** and the **rectus major** muscles. These muscles, in addition to the **rectus minor**, extend from the axis to the atlas and from the atlas and axis to the base of the occipital bone. As you clean the fascia and veins (suboccipital venous plexus) from the triangle, look for the branches of the dorsal primary ramus of C1, which innervates these four small muscles. Insert a probe through the fascia in the floor and upper part of the triangle. A space will be felt between the base of the occipital bone and the arch of the atlas. Clean away the fascia and identify the course of the **vertebral artery** over the arch of the atlas.