

9.14

Classes #5-6: Specializations in CNS evolution

Friday February 11; Monday February 14, 2005

Readings:

Striedter ch 3 pp 51-81, (81-91).
Nauta ch 3 pp 39-49, (ch 4 pp 50-61)
(Swanson ch 4a pp 40-60. See classes 7

Questions on readings: Striedter

- 1) How does its location on a cladogram indicate that Amphioxus is a creature of special interest for studies of vertebrate evolution?
- 2) Salamanders are a member of which of the two main groups of bony vertebrates? The tiger salamander, made famous by Charles Judson Herrick's 1948 book, has been particularly fascinating because of what ability?
- 3) What are "submammalian vertebrates"? Is this a proper term for reptiles or birds?
- 4) What major endbrain structure is lacking in marsupials?
- 5) The vertebrate brain "archtype" shown in Striedter's figure 3.8 shows one region that is huge in teleosts but small, and usually not even named, in mammals. What is it? (This figure resembles the "Shmoo brain" diagrams we use in the class.)
- 6) Are homologous neurons always found within homologous brain regions? (They usually are!)
- 7) Why is it often easier to find similarities in embryonic brains than in the same adult brains?
- 8) What is a neuromere?

Questions on readings: Nauta

- 9) Give the English and the Greek terms for the primary brain vesicles.
- 10) What are the attributes of a "cortex" in the brain?
- 11) What is the English equivalent for the term "diencephalon". Similarly, for the term "telencephalon".