9.14 - Brain Structure and its Origins

Spring 2005

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9.14: Homework Assignment No. 1 Due date: March 7, 2005 (Monday)

There will be no quiz until March 9, 2005 (Wed). But you should still try to keep up with your reading.

- 1. Nauta suggests that the monosynaptic stretch reflex arc might be a relatively recent "invention" of evolution (see p. 71 of chp. 5). Counterintuitive as this idea may seem, can you still suggest a reason justifying such a proposal?
- 2. "Ontogenesis is a brief and rapid recapitulation of phylogenesis," thus stated Ernst Haeckel in his *Riddle of the Universe at the Close of the Nineteenth Century* (1899). In what ways is this statement both useful and misleading? In your response, include definitions of the terms "ontogenesis" and "phylogenesis", as well as a discussion of why the study of embryos is relevant to theories of evolution.

I would appreciate if you can limit your response to each question to a <u>maximum</u> of one page (11 points with spacing of 1.5 lines). The more concise your response, the better.