Biology 112 Handout for Evolution 2

This handout contains:
- HMNH Lab Tips
- Figures for this lecture

Bio 112 HMNH Lab Tips

1. There is no pre lab for this lab.
2. We will hand out free tickets to the HMNH on Friday.
3. You should read over the lab & be prepared (be sure to have notes on the phyla that are present at the HMNH- otherwise, 3 hours will not be enough time.
4. Your answers need not be long (1 to 3 sentences each), but they should be specific and concrete. Be sure to mention specific features, adaptations, etc..
5. You should bring a copy of Campbell to help you find the organisms in question (1).
6. You can go to the HMNH anytime it is open (mon - sat 9-5 & sun 1-5).
7. Your lab report will be due in your assigned lab section during the week of February 11.

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Important Survey Quotes

The following were taken and adapted from your responses to the survey on Monday.

1) The cheetah's ability to run faster evolved because they needed to learn to adapt to environmental changes and they evolved through the years by learning from previous cheetahs.

2) If the prey were running faster the need to be faster had to be adapted into their systems.

3) Cheetahs have dog-like paws allowing them to run faster. At some point in time cheetahs must have mixed with canines to develop this feature. Over time these paws have stayed the same.

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4) The slower cheetahs died out as a result of not being able to catch prey, while the faster ones would survive from catching prey. The ability to catch prey remains while the ability of not being able to catch prey dies out.

5) There was a variation in the population of ancestors that were only able to run 20mph. A select few had the gene variation to run faster. These cheetahs were able to catch prey easier so they became stronger than the others. This allowed them to reproduce more and healthier offspring than the slower cheetahs. By reproducing, they passed on the gene to run faster and those offspring were more likely to survive.

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Evolution of the Equidae (horse-like animals)

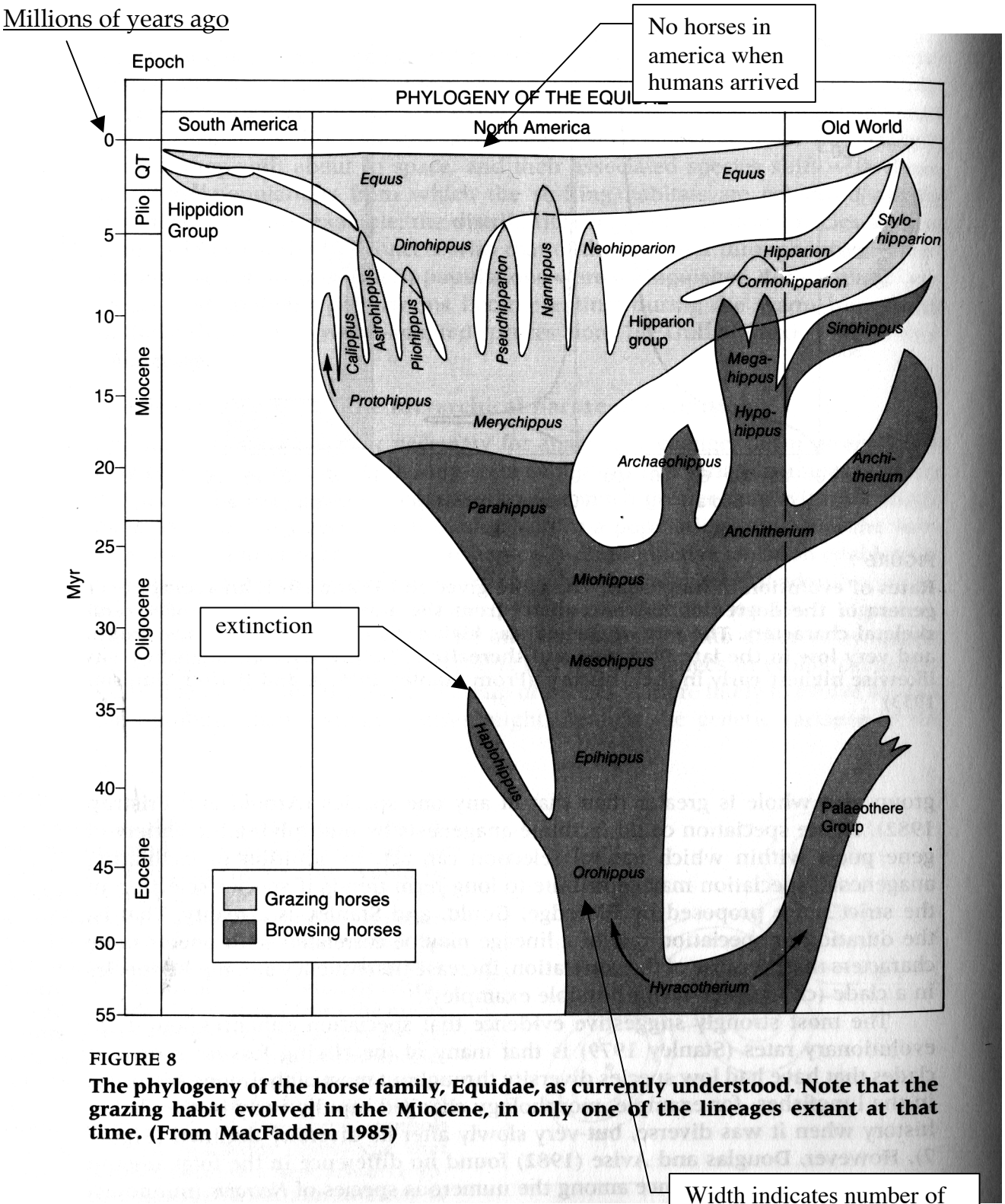

FIGURE 8

The phylogeny of the horse family, Equidae, as currently understood. Note that the grazing habit evolved in the Miocene, in only one of the lineages extant at that time. (From MacFadden 1985)

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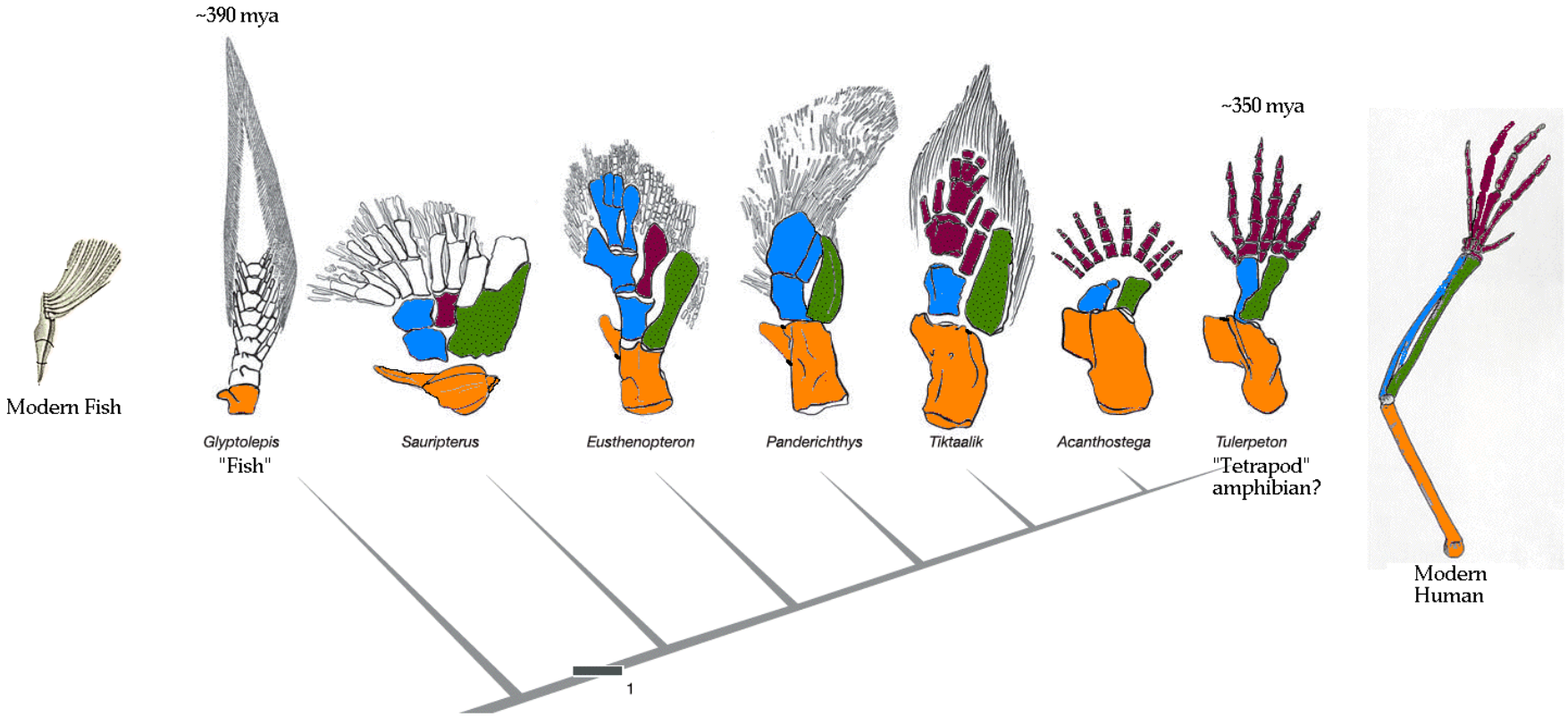
Evolution of Vertebrate Limbs



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