

Reference list (Evo-Devo talk)

Contact: Dr, Jim Platt, University of Denver, Department of Biological Sciences

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General:

Carroll, S. B. 2005. *Endless Forms Most Beautiful*. W.W. Norton (less technical)

Carroll, S.B., J.B. Grenier, and S.C. Weatherbee. 2005. *From DNA to Diversity: Molecular Genetics and the Evolution of Animal Design, 2nd Edition*. Blackwell Publishing (more technical)

Davidson, E.H., and D.H. Erwin. 2006. Gene regulatory networks and the evolution of animal body plans. *Science* **311**: 796-800.

Gilbert, S. F. 2006. *Developmental Biology, 8th Edition*. Sinaur Associates Inc. (see especially Chapter 23)

JUST PUBLISHED! See the September 29, 2006 issue of *Science*. It contains 3 featured review articles related to evo-devo about the genetics of eye evolution, *Hox* gene evolution and the evolution and development of the heart.

Blindness in cave fish:

Jeffery, W.R. 2005. Adaptive evolution of eye degeneration in the Mexican blind cavefish. *Journal of Heredity* 2005, **96**: 1-12.

Loss of pelvic spines and body armor in threespine sticklebacks:

Colosimo, P. F., K. E. Hosemann, S. Balabhadra, G. Villarreal Jr., M. Dickson, J. Grimwood, J. Schmutz, R. M. Myers, D. Schluter, and D.M. Kingsley. 2005. Widespread parallel evolution in sticklebacks by repeated fixation of ectodysplasin alleles. *Science* **307**: 1928-1933.

Cresko, W. A., A. Amores, C. Wilson, J. Murphy, M. Currey, P. Phillips, M. A. Bell, C. B. Kimmel, and J. H. Postlethwait. 2004. Parallel genetic basis for repeated evolution of armor loss in Alaskan threespine stickleback populations. *Proc. Nat. Acad. Sci. U.S.A.* **101**: 6050-6055.

Pennisi, E. 2004. Changing a fish's bony armor in the wink of a gene. *Science* **304**: 1736.

Rundle, H. D., L. Nagel, J. W. Boughman, and D. Schluter. 2000. Natural selection and parallel speciation in sympatric sticklebacks. *Science* **287**: 306-308.

Shapiro, M. D., M. E. Marks, C. L. Peichel, B. K. Blackman, K. S. Nereng, B. Jonsson, D. Schluter, and D. M. Kingsley. 2004. Genetic and developmental basis of evolutionary pelvic reduction in threespine sticklebacks. *Nature* **428**: 717-723.

...and check out this brand new paper from the Kingsley lab at Stanford!

Shapiro, M.D., M.A. Bell, and D.M. Kingsley. 2006. Parallel genetic origins of pelvic reduction in vertebrates. *Proc. Nat. Acad. Sci. U.S.A.* **103**: 13753-13758.

Beak development in Darwin's finches:

Abzhanov, A., M. Protas, B. R. Grant, P. R. Grant, and C. J. Tabin. 2004. *Bmp4* and Morphological Variation of Beaks in Darwin's Finches. *Science* **305**: 1462-1465

Pennisi, E. 2004. Bonemaking Protein Shapes Beaks of Darwin's Finches. *Science* **305**: 1383

Wu, P., T-X. Jiang, S. Suksaweang, R. B. Widelitz, and C-M. Chuong. 2004. Molecular Shaping of the Beak. *Science* **305**: 1465-1466.

Evolution of leg number in insects and other arthropods:

Galant, R., and S. B. Carroll. 2002. Evolution of a transcriptional repression domain in an insect Hox protein. *Nature* **415**: 910-913.

Lewis, D. L., M. DeCamillis, and R. L. Bennett. 2000. Distinct roles of the homeotic genes Ubx and abd-A in beetle embryonic abdominal appendage development *Proc. Nat. Acad. Sci. U.S.A.* **97**: 4504-4509

Ronshaugen, M., N. McGinnis, and W. McGinnis. 2002. Hox protein mutation and macroevolution of the insect body plan. *Nature* **415**: 914-917.

See also Chapter 23 of the Gilbert text and Chapter 5 of the Carroll *et al.* text above.

Some other interesting evo-devo papers (a few among many):

Albertson, R.C., J.T. Streebman, T.D. Kocher, and P. C. Yelick. 2005. Integration and evolution of the cichlid mandible: The molecular basis of alternate feeding strategies. *Proc. Nat. Acad. Sci. U.S.A.* **102**: 16287-16292.

Fondon, J. W. III, and H. R. Garner. 2004. Molecular origins of rapid and continuous morphological evolution. *Proc. Nat. Acad. Sci. U.S.A.* **101**: 18058-18063

Hinman, V.F., A.T. Nguyen, R.A. Cameron, and E.H. Davidson. 2003. Developmental gene regulatory network architecture across 500 million years of echinoderm evolution. *Proc. Nat. Acad. Sci. U.S.A.* **100**: 13356-13361.

Sears., K.E., R.R. Behringer, J.J. Rasweller IV, and L.A. Niswander. 2006. Development of bat flight: Morphologic and molecular evolution of bat wing digits. *Proc. Nat. Acad. Sci. U.S.A.* **103**: 6581-6586.

Thewissen, J.G.M., M.J. Cohn, L.S. Stevens, S. Bajpai, J. Heyning, and W.E. Horton, Jr. 2006. Developmental basis for hind-limb loss in dolphins and origin of the cetacean bodyplan. *Proc. Nat. Acad. Sci. U.S.A.* **103**: 8414-8418.