

Duluth Campus

Department of Sociology -Anthropology

College of Liberal Arts

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18 September 2011

DAY Prehistoric Cultures Week 3:
Heredity and Evolution / Variation and Adaptation
Patterns of Variation
Journey of Man

We'll continue on and off to look at slide materials aimed at setting the basic analytic, theoretical and historical framework for the course, as time permits. We'll get back to that next week . . . and in the weeks that follow. And in-between we'll have a look at "How to Study for Exams."

This week we're going to have a closer look at genetics, DNA, and the work of Spencer Wells and the Genographic Project team at National Geographic.

Before we return to the Genographic Project we'll have close look at one of the main related concepts in Anthropology, and Prehistoric Cultures in particular . . .

variation.

The video *Patterns of Variation* briefly discusses the concept of "race" then explains how today anthropologists and scholars ". . . analyze genetics and DNA, the cornerstone of genetic studies, to describe and understand human diversity" ([Coast Learning Systems](#)). *Patterns of Variation* will discuss a few more basic terms and ideas relating to Ch. 4 of the text *Understanding Humans*: "Human Variation and Adaptation."

After viewing *Patterns of Variation* we'll return to watch Spencer Wells http://en.wikipedia.org/wiki/Spencer_Wells and the National Geographic Genographic team in action <http://www.d.umn.edu/cla/faculty/troufs/anth1602/pggenographicproject.html#title>, as they go around the world on a . . . *Journey of Man*. . . .

It's a long journey, and a long video—it will take 120 minutes. So be prepared.

"*JOURNEY OF MAN* tells the remarkable story of the human journey out of Africa and into the rest of the world, tracing history through evidence uncovered in the Y-chromosome of man's DNA. Traversing six continents, the film takes viewers on a fascinating journey into the hidden world of their ancestry and offers a modern look at our ancestor's lives." -- National Geographic

And as time permits we'll have a look at my DNA results as part of the National Geographic Project's *Journey*. We'll briefly compare the "journey" of my Roufs ancestors with the DNA results of Professor Emeritus Tom Bacig, and interesting comparison as Prof. Bacig is part Canadian Metis.

Don't forget that your Case Study is due Friday, 23 September 2011. Details of the Case Study are at http://www.d.umn.edu/cla/faculty/troufs/anth1602/case_studies/pcCS-01.html#title. As mentioned last week, it is basically a short summary of (A) your view of "What's New" in the world of anthropology, and (B) what news you personally find most interesting (and why).

If you have any questions about anthropology, or about the class and the assignments, please let me know: <mailto:troufs@d.umn.edu>.

Be sure to check the details of the activities and assignments each week on your  Moodle Home Page.

Try to coordinate your Week 3 forum posts with this week's video presentations . . .

- Forum: What do you Make of Prehistoric DNA Studies? (Due by Friday, 30 September 2011)
- Forum: "Black as Barack" (Due by Friday, 30 September 2011)
 - Information on Points for Forum Posts
- Case Study "What's New? Current Trends and New Discoveries" due Friday, 23 September 2011 ~

Don't forget to share your ideas, including study-questions with your classmates. Discuss them on-line with the others in class . . .

DAY


DAY class wiki: [General Student Discussion Area Forum](#)

DAY project live chat: [Live chat for Project Collaboration](#)

CE

CE class wiki: [General Student Discussion Area Forum](#)

CE project live chat: [Live chat for Project Collaboration](#)

Your  Moodle Class Topics and Reading Assignments for Week 3 will look something like the information at the end of this memo. There are a lot of materials assigned, so **be sure to read the avisos that come with the assignments for Chs. 3-4-5 . . .**

- **read and study for basic concepts and definitions**
- **the main concepts and definitions will be reviewed in class**
- **do not worry too much about the biochemistry and biostatistics**

Best Regards,

Tim Roufs

Your Moodle Presentations Listings for Week 3 will look something like this:

DAY [Case Study "What's New? Current Trends and New Discoveries"](#) due Friday, 23 September 2011, 11:55 p.m.

CE [Case Study "What's New? Current Trends and New Discoveries"](#) is due Friday, 23 September 2011, 11:55 p.m.

-- [Web: Texas A&M News](#)

[Anth 1602 Prehistoric Cultures](#)

Week 3 — Heredity and Evolution / Variation and Adaptation



[DAY Week 3 Memo](#)
[CE Week 3 Memo](#)

DAY 05 Tuesday, 20 September 2011 video:
CE Monday, 26 September 2011 nlt 5:42

Patterns of Variation

(28 min., 2008, DVD 1932)

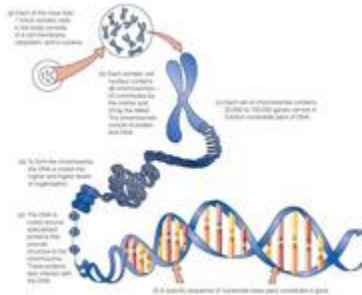
[film HomePage](#)
[transcript](#)

we will have a look at the sister concept Week 13
video:


Patterns of Adaptation

(28 min., 2008, DVD 1891)

[film HomePage](#)
[transcript](#)



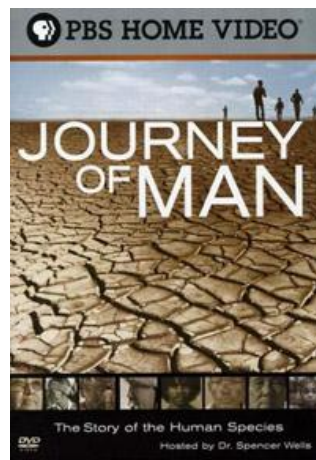
[DNA](#)

CHAPTER 4 Modern Human Variation and Adaptation Introduction 72 Historical Views of Human Variation 72 The Concept of Race 74 Racism 76 Intelligence 77 Contemporary Interpretations of Human Variation 77 Human Polymorphisms 78 Polymorphisms at the DNA Level 79 AT A GLANCE: Former and Contemporary Approaches to the Study of Human Variation 80 Human Biocultural Evolution 81 Population Genetics 83 The Adaptive Significance of Human Variation 83 Solar Radiation, Vitamin D, and Skin Color 84 The Thermal Environment 87 High Altitude 90 Infectious Disease 92 The Continuing Impact of Infectious Disease 94 AT A GLANCE: Zoonoses and Human Infectious Disease 96 Summary 97 Critical Thinking Questions 98	 <i>Primates</i> CHAPTER 6 An Overview of the Primates Introduction 118 Primate Characteristics 118 Primate Adaptations 122 Evolutionary Factors 122 Geographical Distribution and Habitats 123 Diet and Teeth 123 Locomotion 126
CHAPTER 5 Macroevolution: Processes of Vertebrate and Mammalian Evolution	

DAY 05 Tuesday, 20 September 2011 (beginning.) video:
CE Monday, 26 September 2011 nlt 6:25

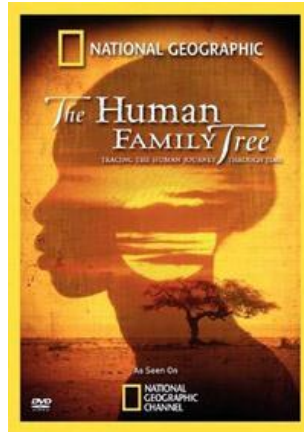
Journey of Man . . .
(120 min., 2003, DVD 742)

[film HomePage](#)
[course viewing guide](#)



[DNA](#)

[The Genographic Project](#)



2009

[The Human Family Tree HomePage](#)


DAY 06 Thursday, 22 September 2011 (cont.) video:

Journey of Man . . .
(120 min., 2003, DVD 742)


film [HomePage](#)
[course viewing guide](#)

Heredity and Evolution:
The National Geographic Genographic Project

Roufs Genographic
slides: (.pdf) ([.pptx](#))



Genographic Project Slides:
([Genographic_Roufs.pptx](#))



Venus of Willendorf

For Week 3 Activities see **moodle**

assignment:

This is a lot of material for the week, but with this material the major points will be covered in class. When you are done looking over Chs. 3-5 you should know what an item is; you do not have to know all of the details of how it works--except for the items that we go over in class.

- ~ Ch. 3, "Heredity and Evolution" pp. 37-70
- ~ Ch. 4, "Modern Human Variation and Adaptation," pp. 71-98
- ~ Ch. 5, "Macroevolution: Processes of Vertebrate and Mammalian Evolution," pp. 99-116

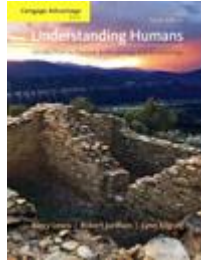
NOTE:

- read and study for basic concepts and definitions

- **the main concepts and definitions will be reviewed in class**
- **do not worry too much about the biochemistry and biostatistics**

~ Page through "Appendix C: Population Genetics," pp. 438-440

(Check the Week 03 Assignments page for list of terms)
see note in Moodle



assignment:
▣ [Case Study](#)

For Week 3 Activities see  Moodle