



# Phenotype Research Coordination Network

23-25 February 2012

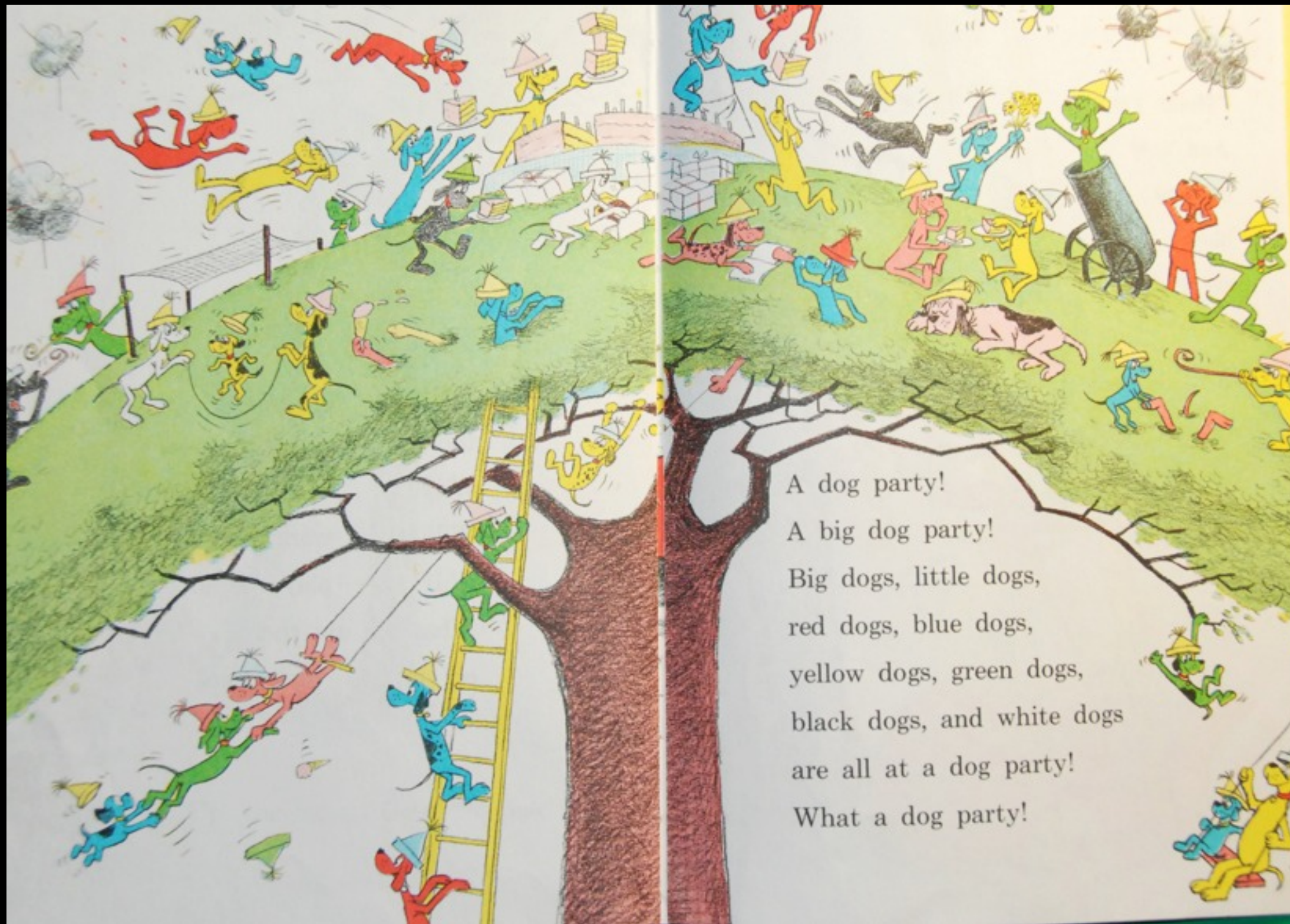
Paula Mabee

Andy Deans

Eva Huala

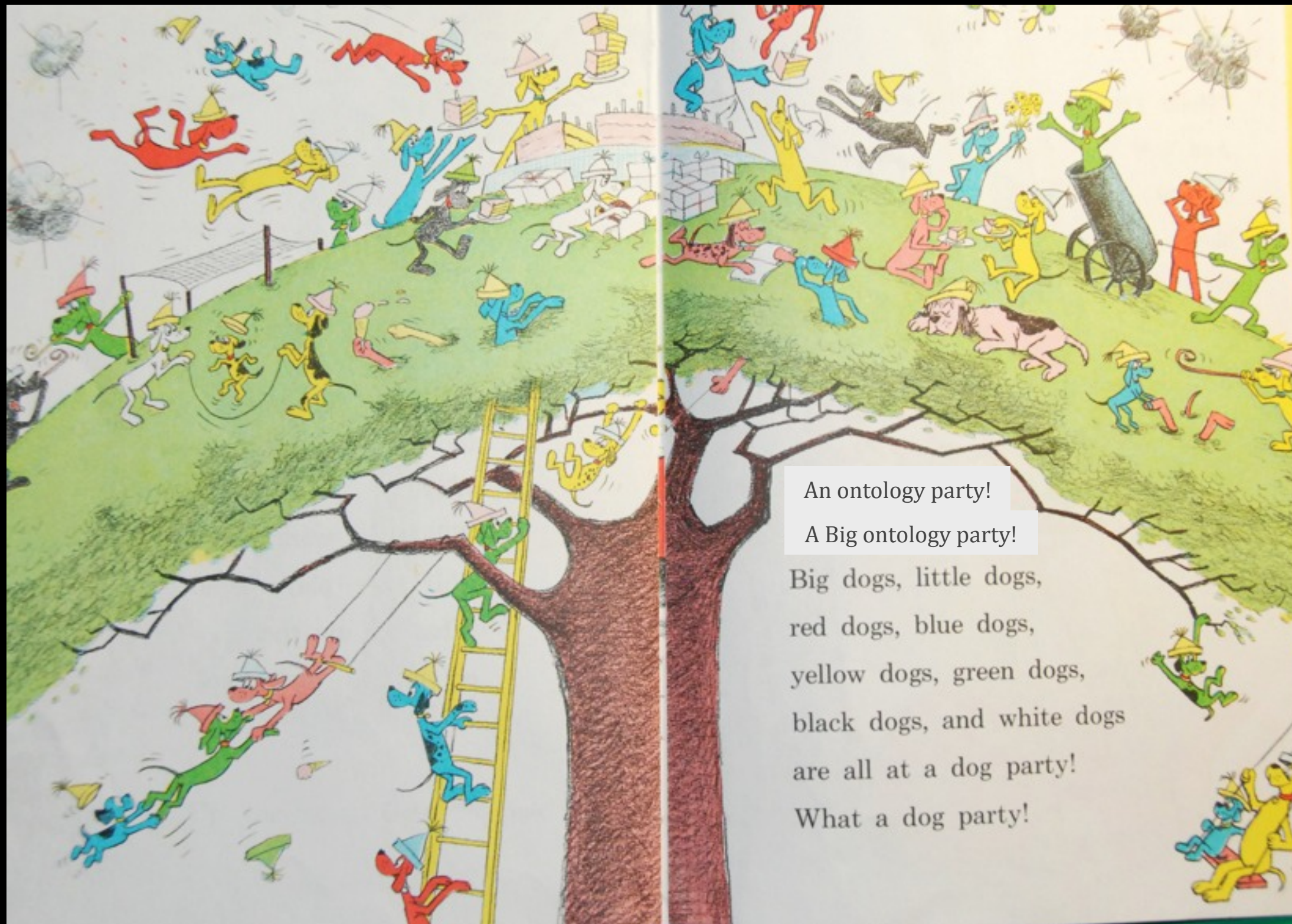
Suzanna Lewis





Go!





An ontology party!

A Big ontology party!

Big dogs, little dogs,  
red dogs, blue dogs,  
yellow dogs, green dogs,  
black dogs, and white dogs  
are all at a dog party!  
What a dog party!

# Go!



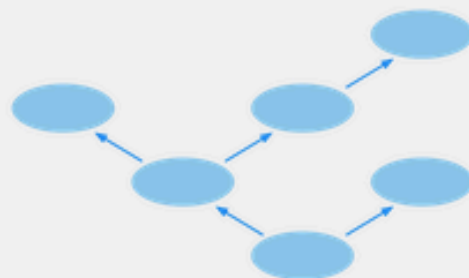
# Research Coordination Networks

“To encourage and foster interactions among scientists to create new research directions or advance a field”

NSF solicitation: [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=11691](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=11691)



# Phenotype RCN



## Welcome

*The Phenotype Ontology Research Coordination Network (RCN) was funded by NSF to establish a network of scientists who are interested in comparing phenotypes across species and in developing the tools and methods needed in making this possible.*

*» [Read more about the RCN](#)*



## About

The Phenotype Ontology Research Coordination Network (RCN) was funded by NSF to establish a network of scientists who are interested in comparing phenotypes across species and in developing the tools and methods needed in making this possible. The representation of morphology, behavior, and other phenotypic traits using ontologies is in its infancy. Integrating phenotypes with data across all levels of the biological hierarchy, however, is possible if standards are co-developed and coordinated.

This RCN envisions building a community that because of its domain expertise, sets the standards and best practices for the development of phenotype ontologies and a vision for their utility. Please sign up as a [participant](#) and blog subscriber for further information and feel free to contact one of the PIs. We look forward to this opportunity!

[Paula Mabee](#), [Andy Deans](#), [Eva Huala](#), and [Suzanna Lewis](#)

## Representing phenotype

## Announcements

- [Funding for Meetings](#)
- [Collaborative Exchange Opportunities](#)
- [Jobs/Postdocs](#)
- [Annual Meeting Feb. 23-25, 2012](#)

## Wiki



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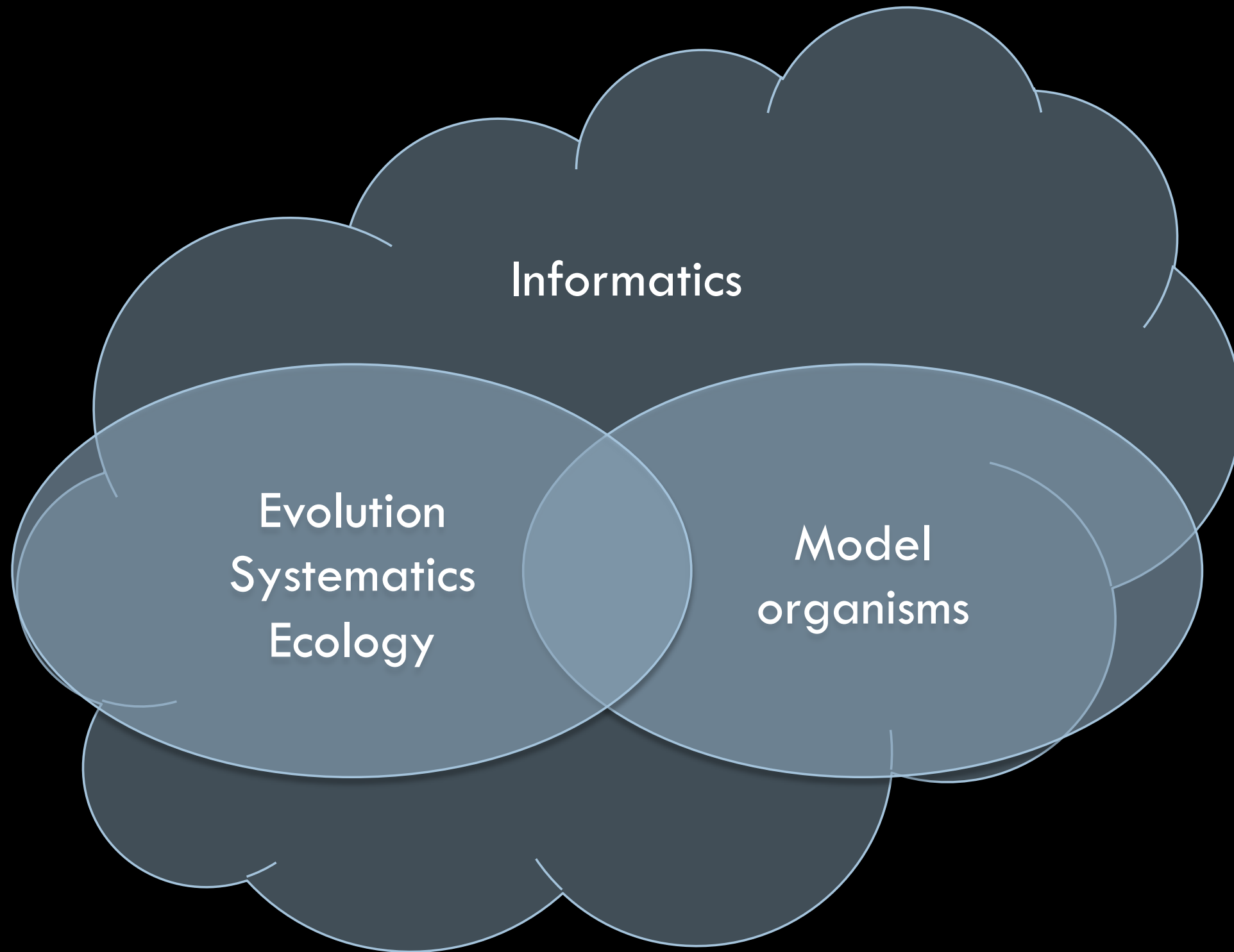
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# Phenotype RCN goals:

1. Develop community network
2. Develop anatomy ontologies across taxa so they are interoperable
3. Represent phenotype in a consistent and standardized manner
4. Enable community use of resources

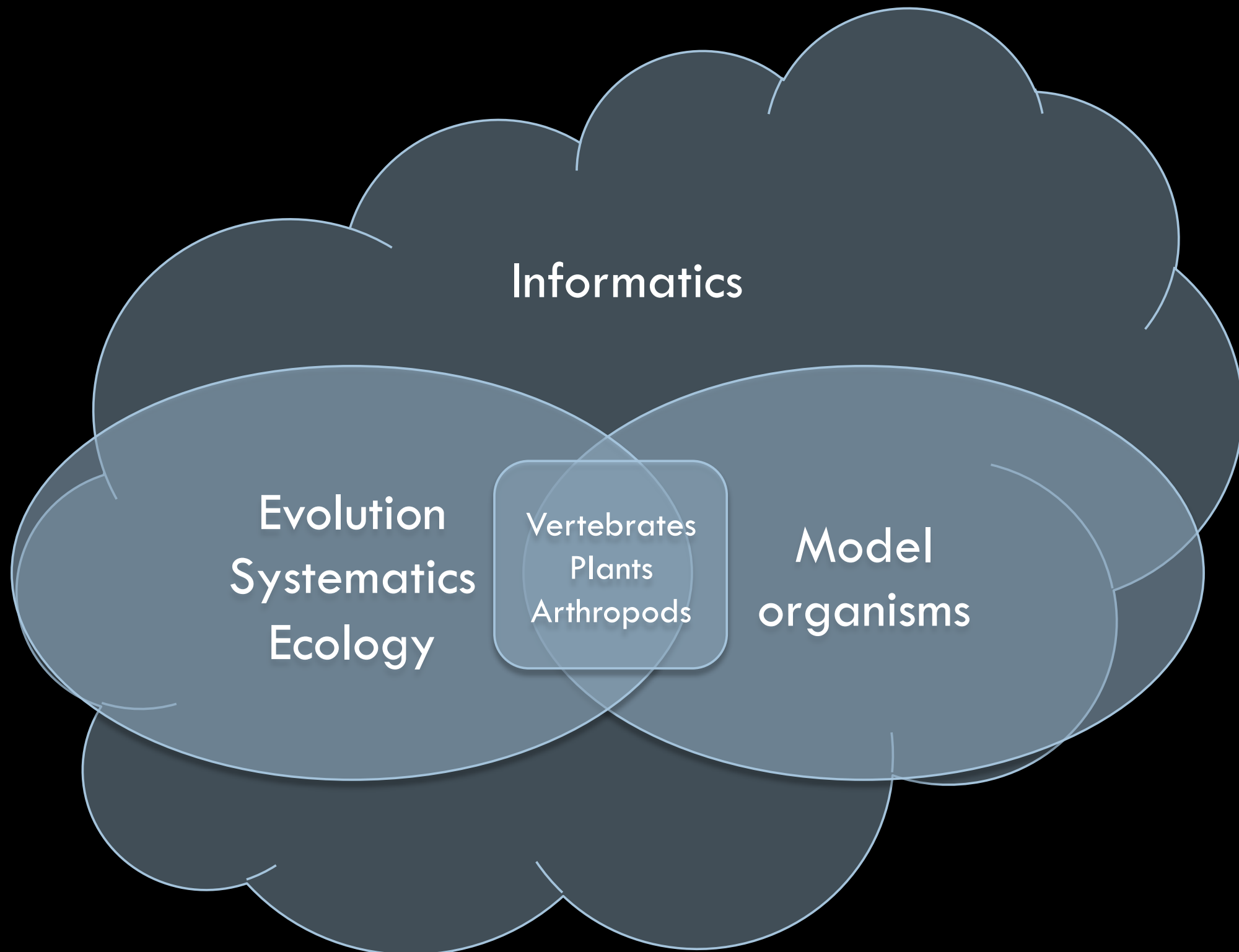


# Phenotype RCN





# Phenotype RCN











12 Feb 2011 | Science

# Deluge of genomic data

(12 Feb 2011 Science)

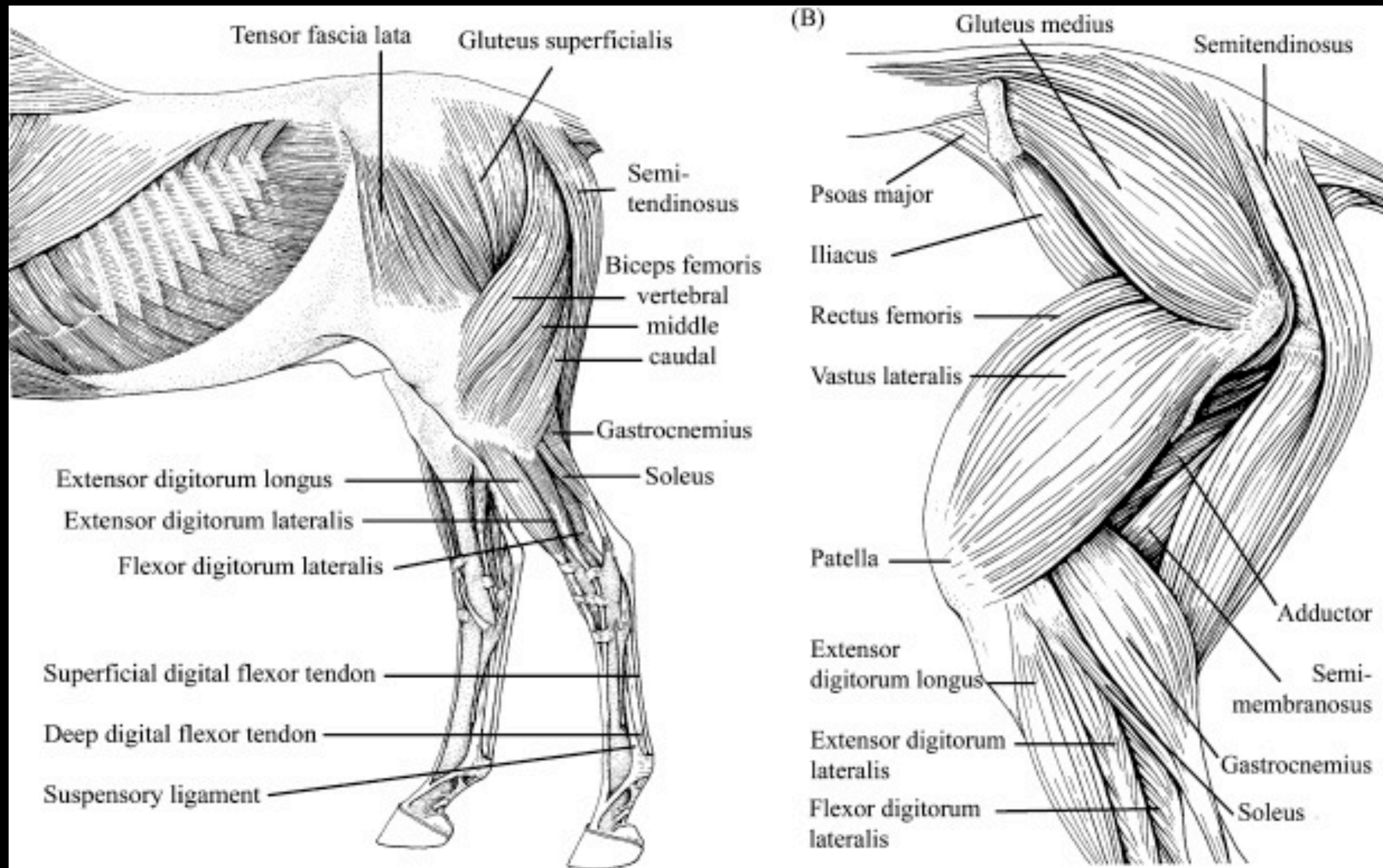




# Paleolithic phenotypes

Artist unknown, Lascaux





# Scientific phenotypes

J Anat. 2008 February; 212(2): 144–152. doi: 10.1111/j.1469-7580.2007.00848. Figure taken directly from Payne et al. (2005), by permission



## Animal Kingdom: arranged according so its organization, forming the basis ... By Cuvier



★★★★★

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fish inauthor:Cuvier

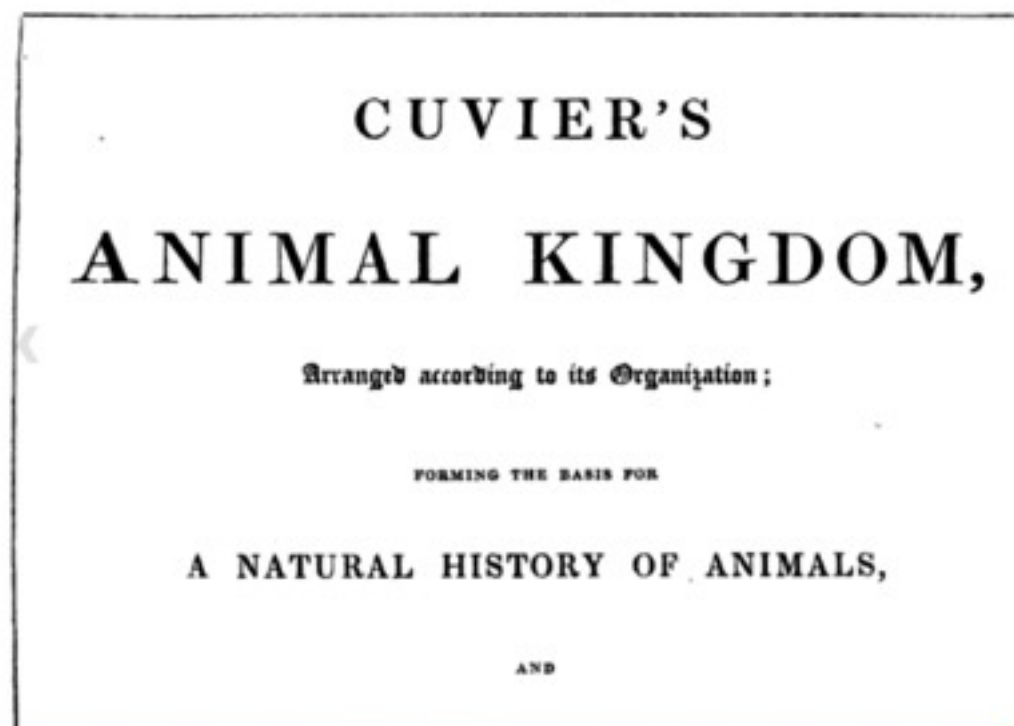
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Animal Kingdom, arranged according so its organization, forming the basis for a natural history of animals, and introduction to comparative anatomy - Cuvier



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suborbital

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The Star-gazer is the only genus of the Perch family which resembles them in this respect ; but in it, though the **suborbital** bone is very broad, ... 294

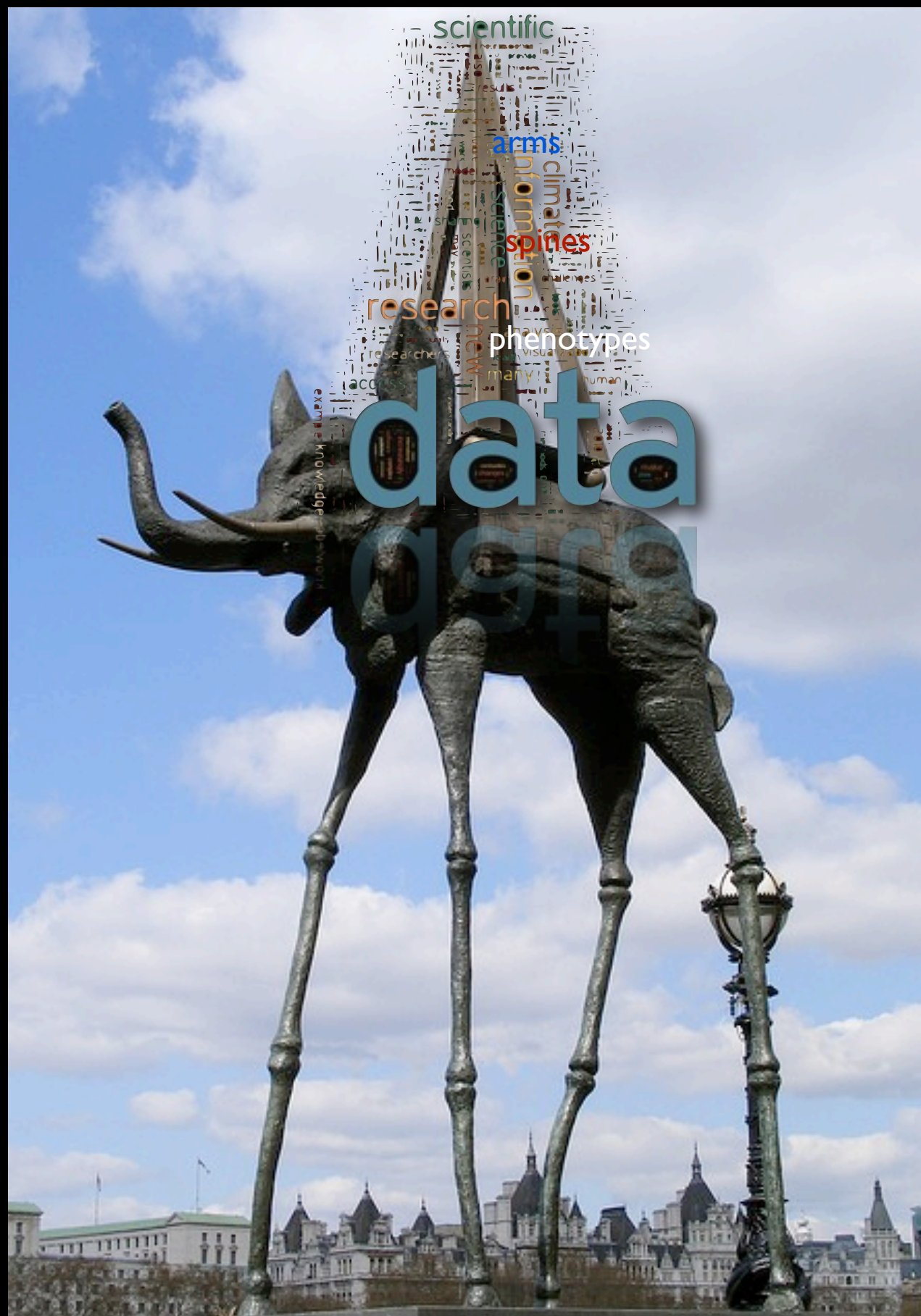
... small ventrals, and one dorsal, consisting of three lobes. Apulei, Treacherous, are small fishes, having a formidable spine on the **suborbital** ... 295

Scolojula, have the second **suborbital** plate toothed, and terminated by a point directed backwards, crossing another point of the third **suborbital**, ... 296

The second, with the characters of Capito, have the **suborbital** notched, showing the maxillary, if, chilo, is common in the Mediterranean ... 305

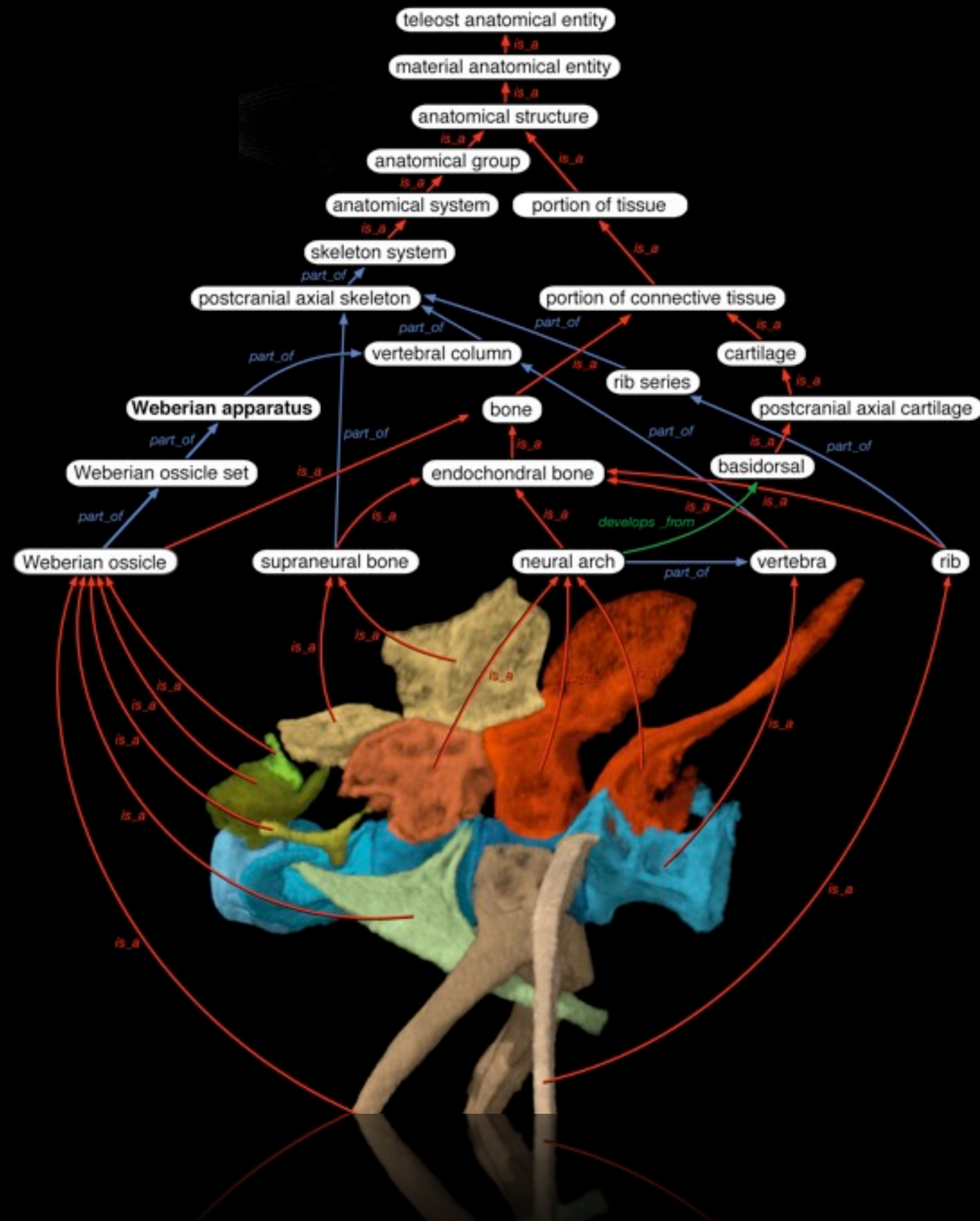
In the living state, the jaws are covered with fleshy lips, but there is no double lip adhering to the **suborbital** bones. These fishes have the oblong form ... 311

... the tongue and vomer are always smooth, but the jaws have conical teeth, and the large **suborbital** covers the cheek like an operculum. ... 319



adapted from Dali





Dahdul et al., 2010,  
Systematic Biology



*Pimelodus maculatus*  
photo J. Lundberg, ANSP 2002



# This meeting:

- ✦ Inspiring speakers
  - **think** of new ways to use annotations
- ✦ Hands-on exercises
  - **learn** to build ontologies (IOI & AP)
  - **take home** annotation tools
- ✦ Exciting participants; breakout groups
  - **meet** collaborators