

# NATURAL NAVIGATION

+Evolution of Navigation

Just van den Broecke  
June 25, 2025  
Maptime @TomTom HQ

**Just van den Broecke**  
**Open Source**  
**Geospatial Professional**  
[www.justobjects.nl](http://www.justobjects.nl)

*Soy  
hollandés*

**About  
Me**

Founder

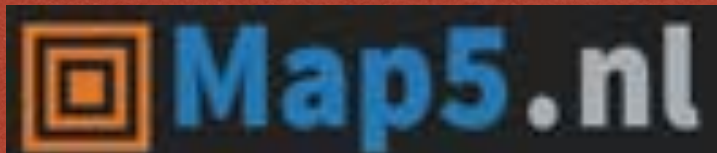


**FLOSS Projects**



**nlextract**

**Cloud Services**

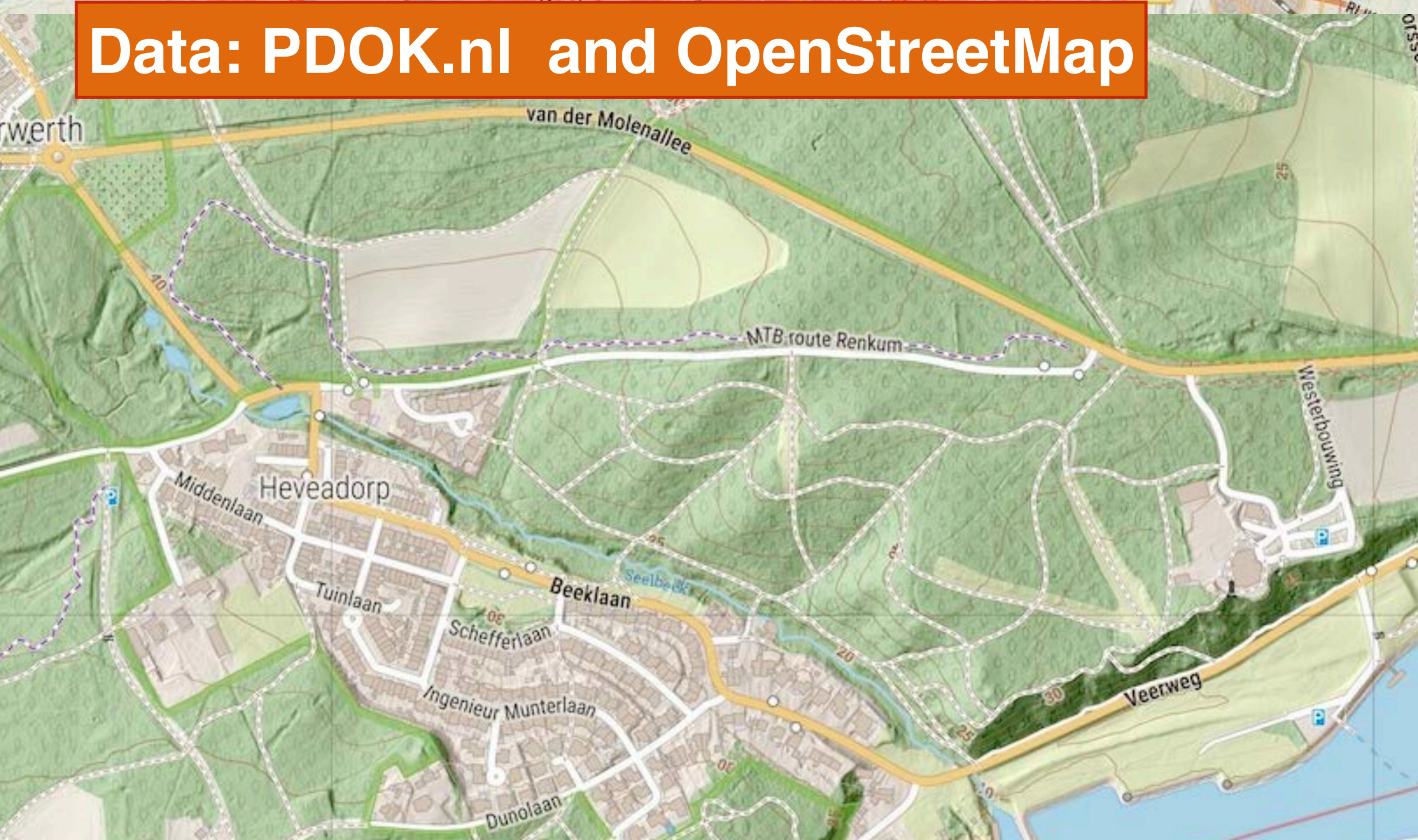


**OpenStreetMap Mapper**  
[openstreetmap.org/user/justb](http://openstreetmap.org/user/justb)



Yes, we have heights!

Data: PDOK.nl and OpenStreetMap



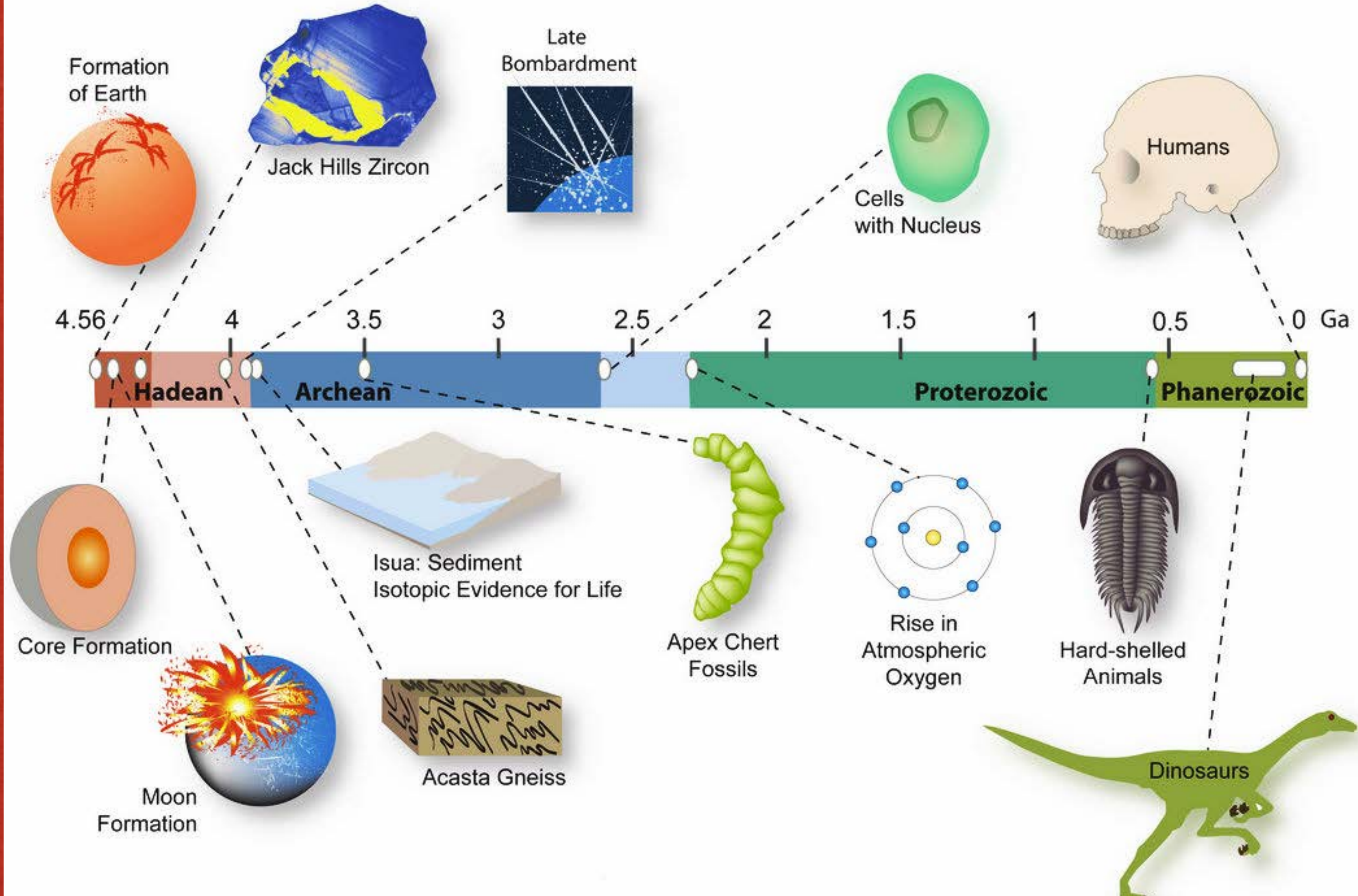
# Hardanggervidda (Norway 1973)



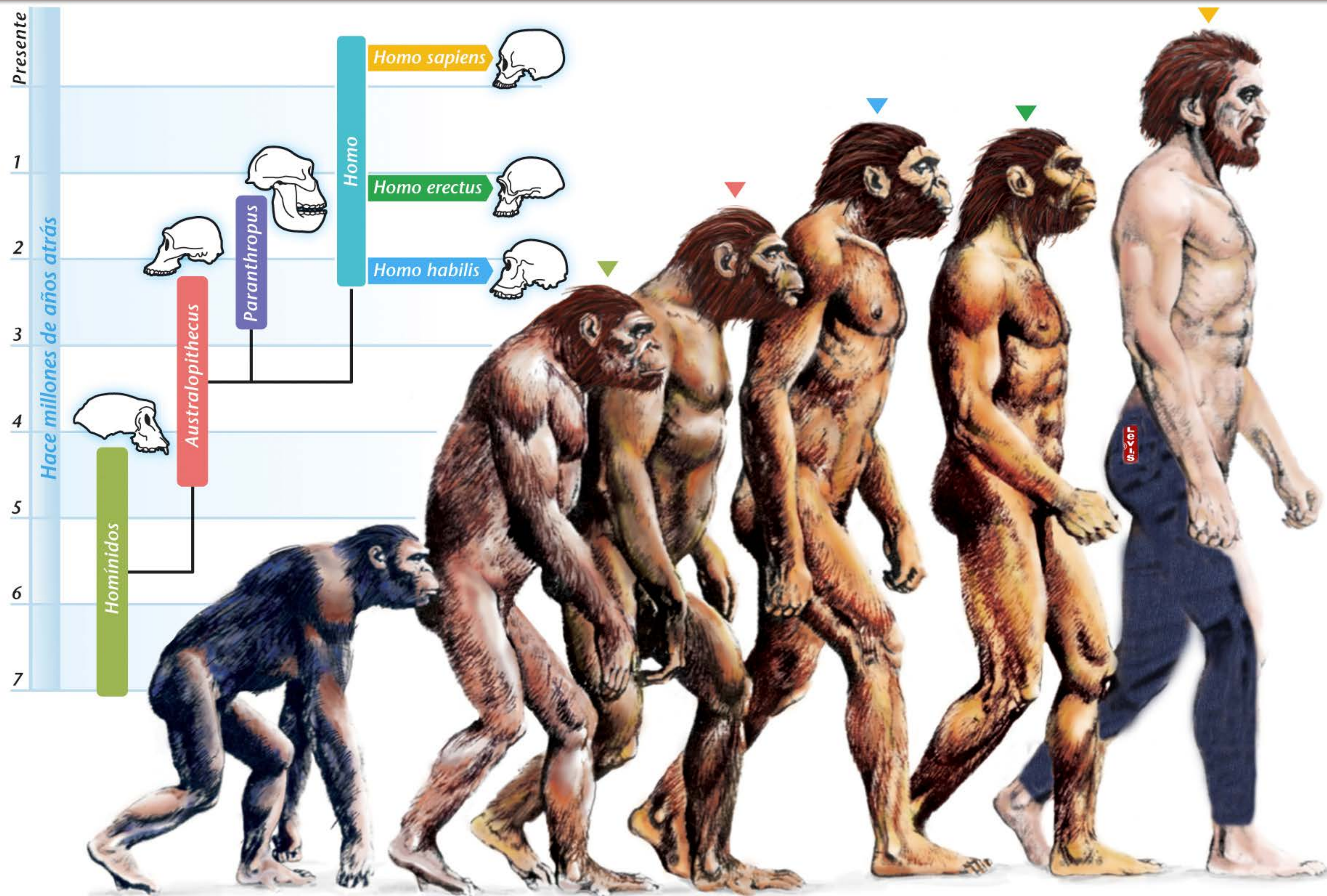


# ***Evolution of navigation***

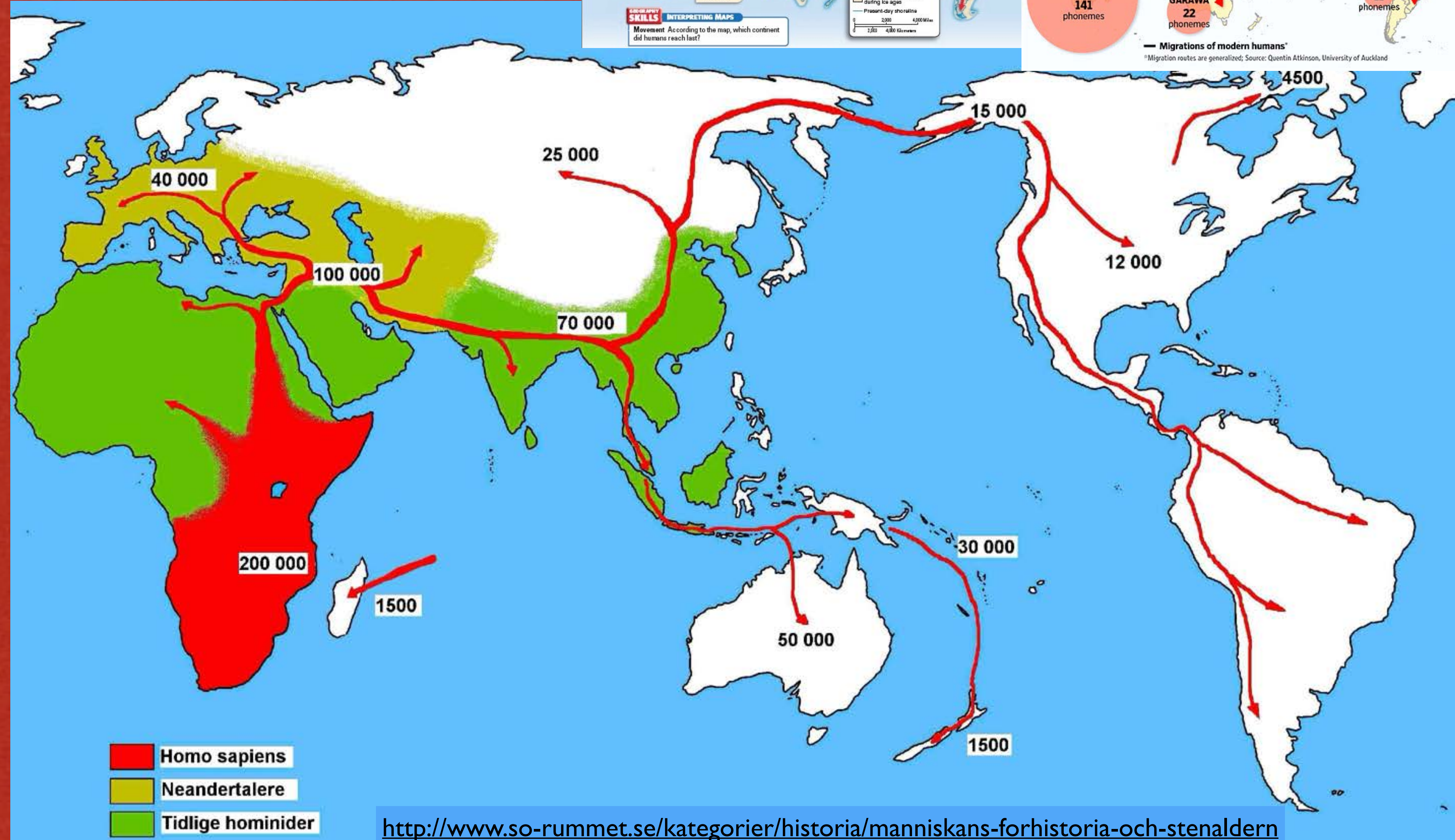
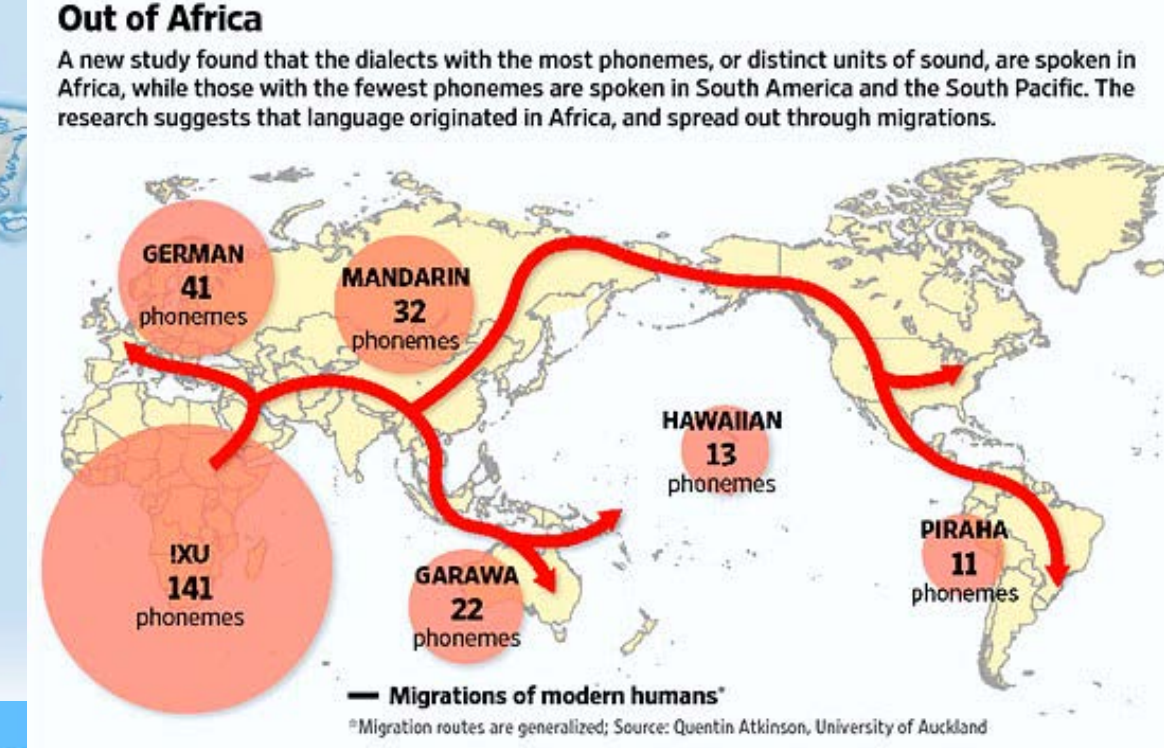
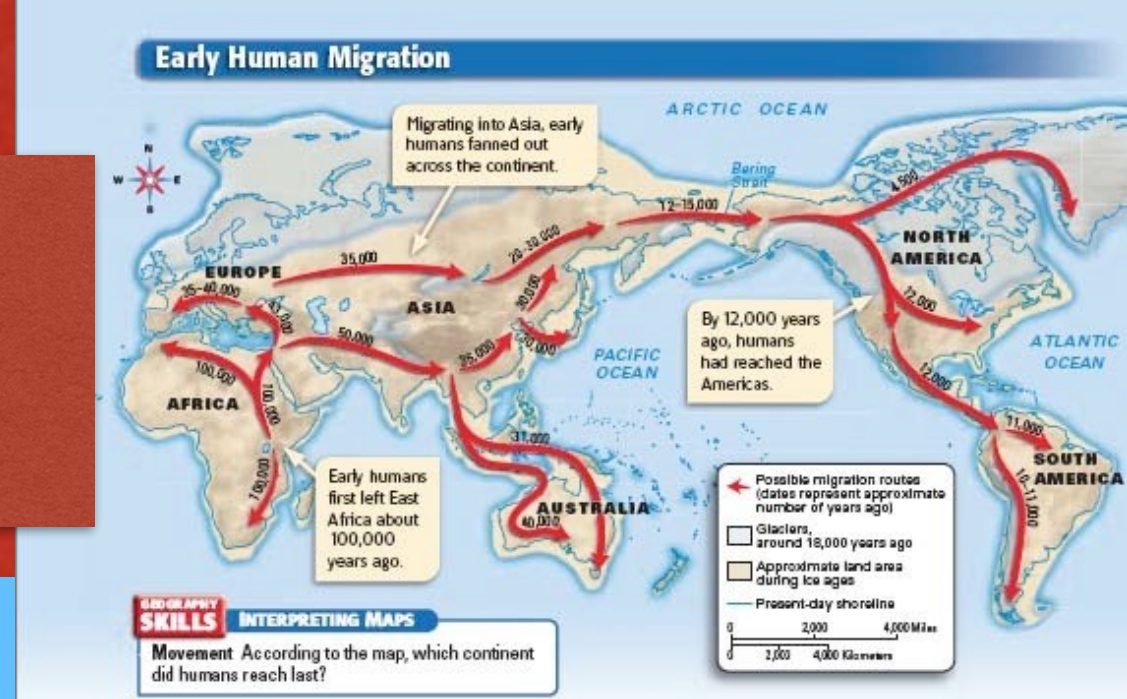
# Evolution- Earth



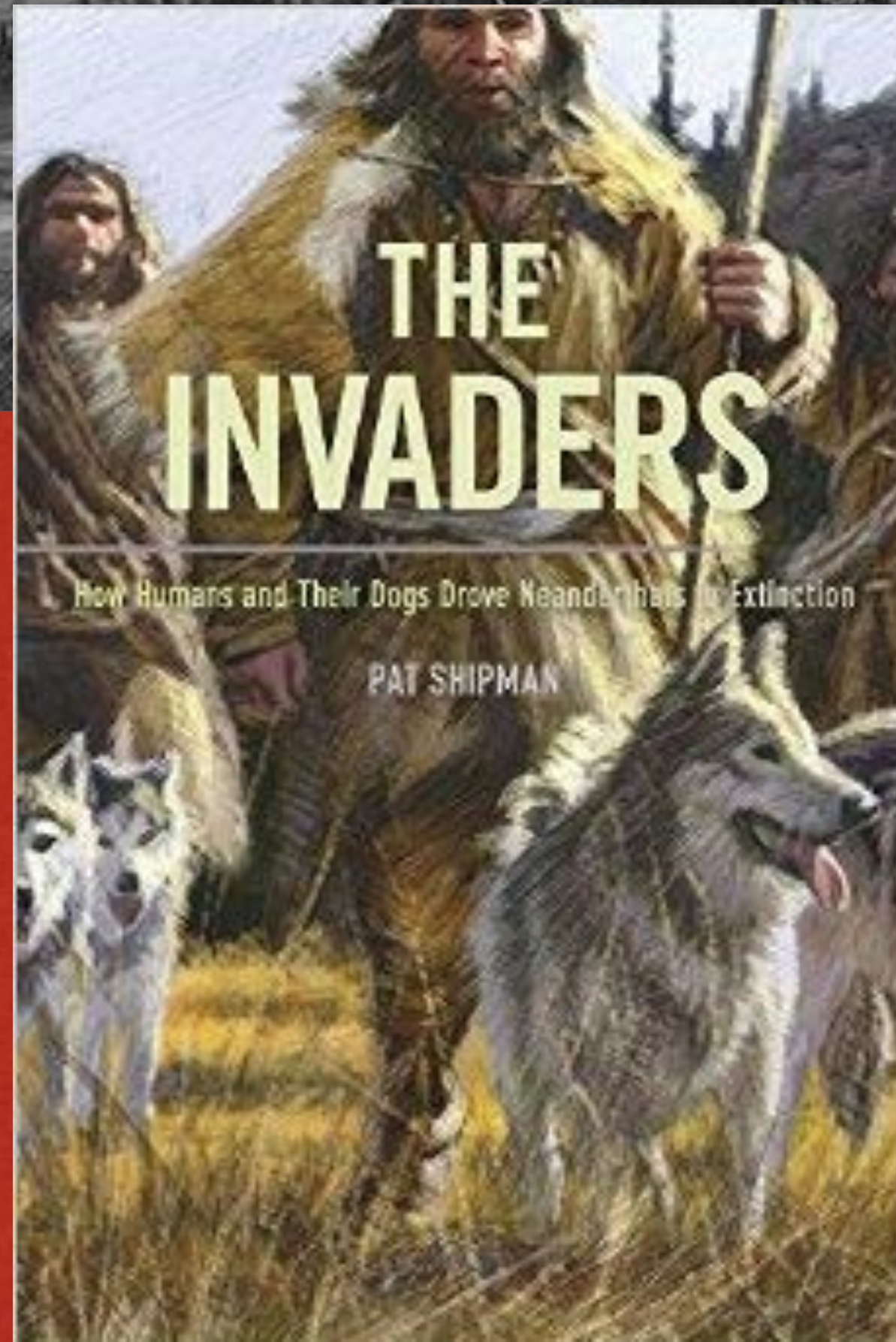
# Evolution - Human



# “We’re all from Africa”



# Evolution of Navigation - Dogs?



**DID DOGS MAKE MAN  
A 'SUPER PREDATOR'  
THAT DROVE THE  
NEANDERTHAL  
TO EXTINCTION?**

[wsj.com/TheShortAnswer](http://wsj.com/TheShortAnswer)

# Evolution of Navigation - Dogs?



# Evolution of Navigation - Dogs?

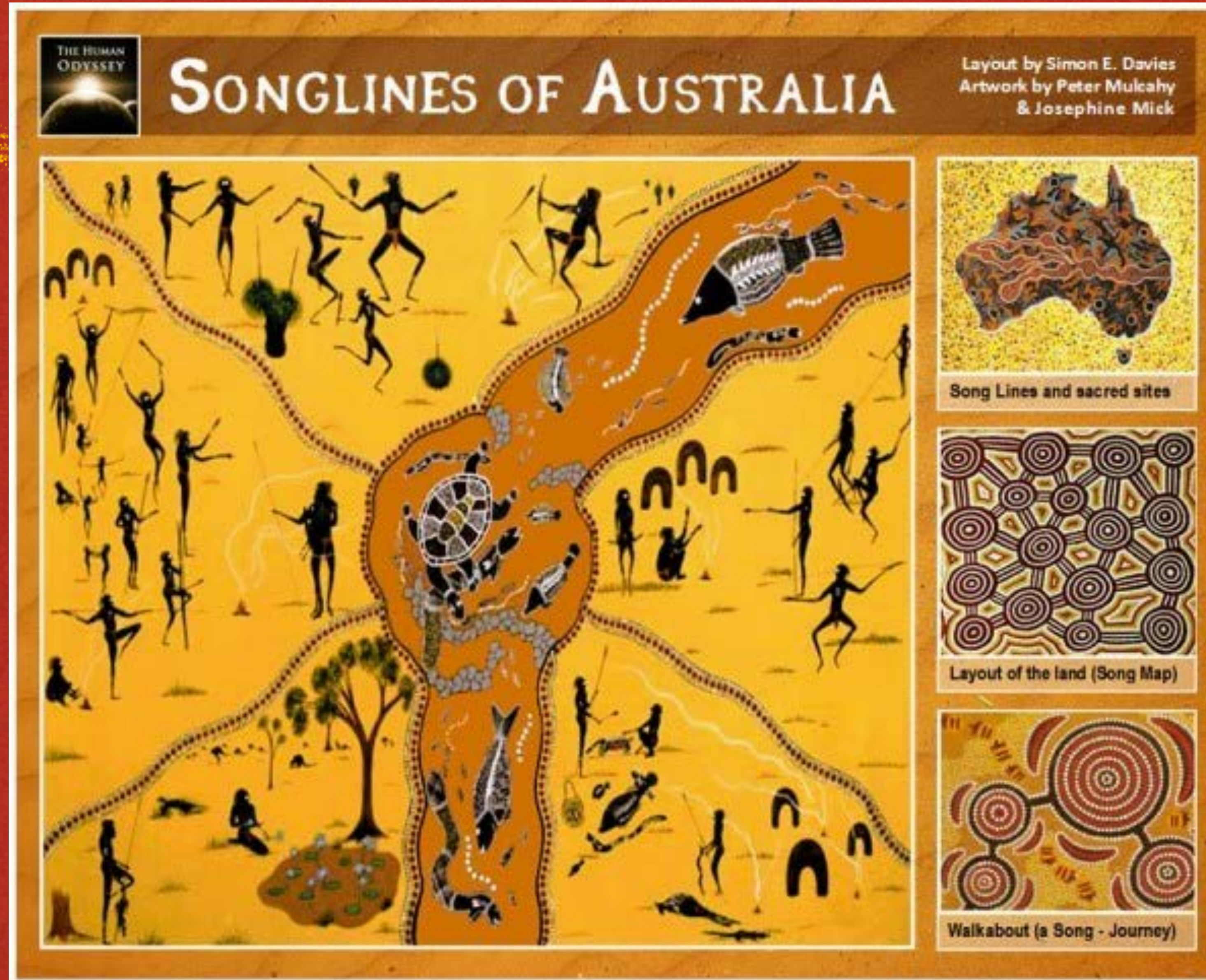
Disney

## HOMeward BOUND

THE INCREDIBLE JOURNEY



# Evolution of Navigation - Songlines



# Evolution of Navigation - Tupaia Map



— SOCIETY —

## Reading a Pacific navigator's mysterious map may require a shift in perspective

A voyager named Tupaia guided Captain James Cook through the South Seas and drew an island-filled chart that has puzzled scholars for more than 250

years

<https://knowablemagazine.org/content/article/society/2021/reading-pacific-navigators-mysterious-map>

English artist William Hodges traveled on Captain James Cook's second voyage to the Pacific Ocean and, upon his return home, painted this scene of Matavai Bay, Tahiti in 1776. Several types of Tahitian watercraft are visible in the foreground, with Cook's ships, the *Resolution* and the *Adventure*, anchored beyond.

CREDIT: WILLIAM HODGES / PUBLIC DOMAIN



# Natural Navigation

# What is Natural Navigation?

<https://www.naturalnavigator.com/natural-navigation>

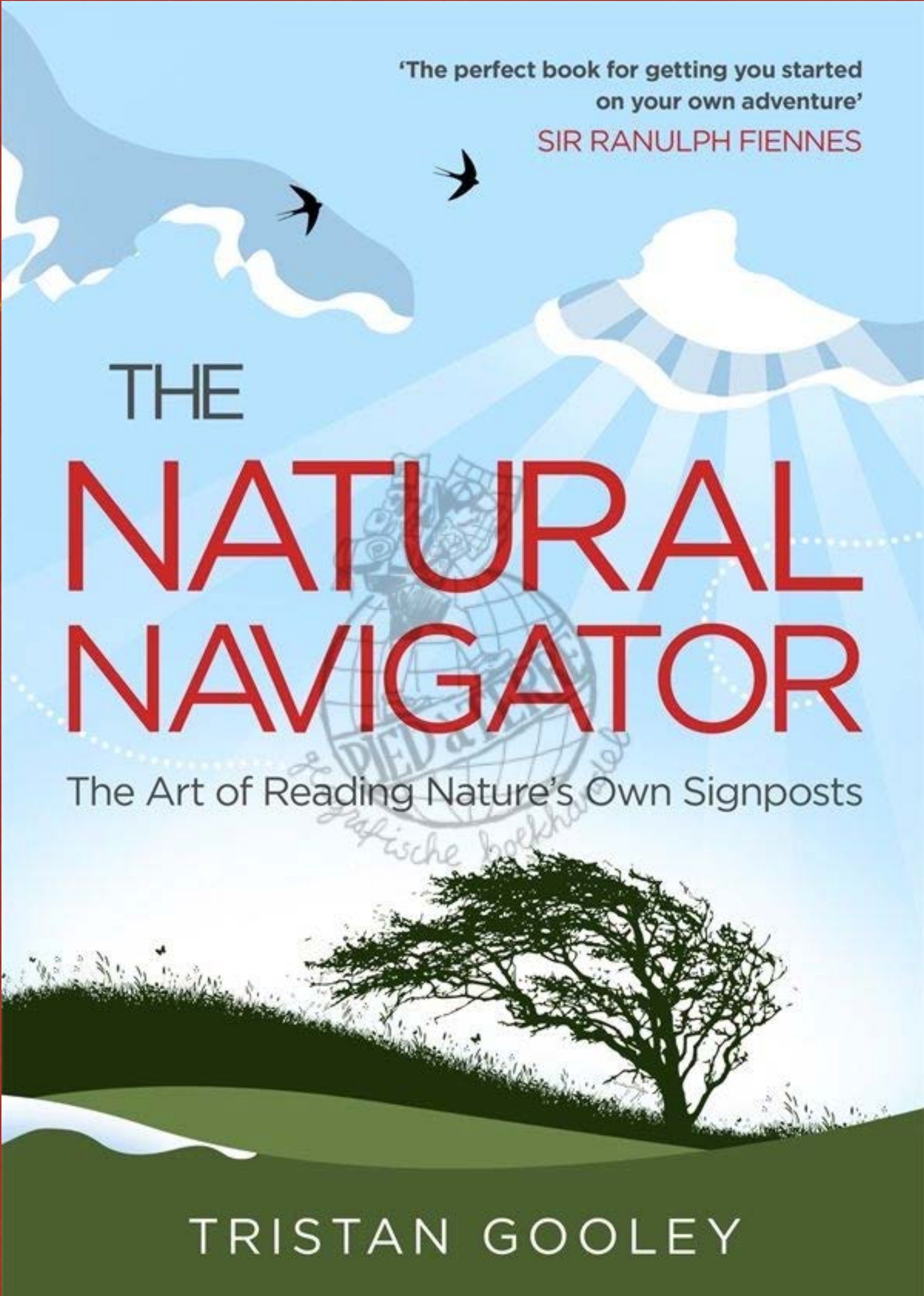
Natural navigation is the rare art of finding your way using nature. Natural navigators learn to read the sun, moon, stars, weather, land, sea, plants and animals. It is possible to navigate naturally on land or water, in the wild or in cities.

Tristan Gooley's approach to the subject is unique in that he does not view it as a survival skill, to be used in bad times, but as a means to understand and connect with the world around us.

***"Everything outdoors is a clue. Every plant, animal, cloud or star is a sign and part of our map."***

Tristan Gooley

Fortunately very few of us are likely to ever find ourselves in a genuine survival situation, but we all spend some time outdoors. This time can become fascinating if we take our eyes off the smartphone, GPS or map for a few moments and ask the simple question, 'Which way am I looking?'



'The perfect book for getting you started  
on your own adventure'

SIR RANULPH FIENNES

THE  
**NATURAL  
NAVIGATOR**

The Art of Reading Nature's Own Signposts

TRISTAN GOOLEY

<https://www.naturalnavigator.com/>

Examples/photos from there.

# Trees and Sun

1.



2.



Q: Walking to tree: heading N, E, S or W?

# Trees at Night



*Q: Are we looking from N, E, S or W?*

# Trees and Wind



*Q: What is the prevailing wind direction in NL?  
So: which direction are NL-trees pointing?*

# Mosses on Trees



# Lichens - “Korstmossen”



# Learning?

<https://www.naturalnavigator.com/natural-navigation-courses/>



