

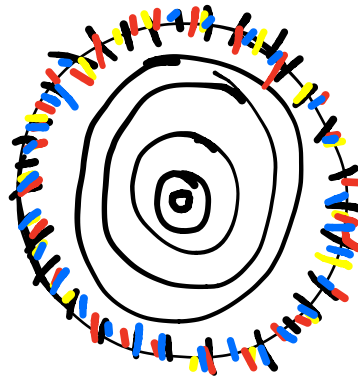
Carl Zimmer

DOE
JGI

The Genome Beat

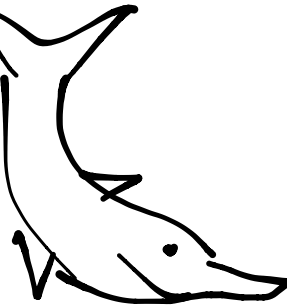
STARTED
AS A
SCIENCE
WRITER

He even
has a parasite
named after
him.



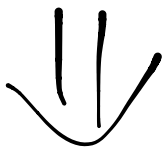
BUT
NOWBY
WORKING
ON
GENOMICS

STARTED
WITH
DOLPHINS



"UNDER THE HOOD - DOLPHINS
ARE A MESS"

EVEN IN MOBY DICK - WHALE
REFERRED TO AS A FISH



THEY CAME DOWN

THEN THE SWIM

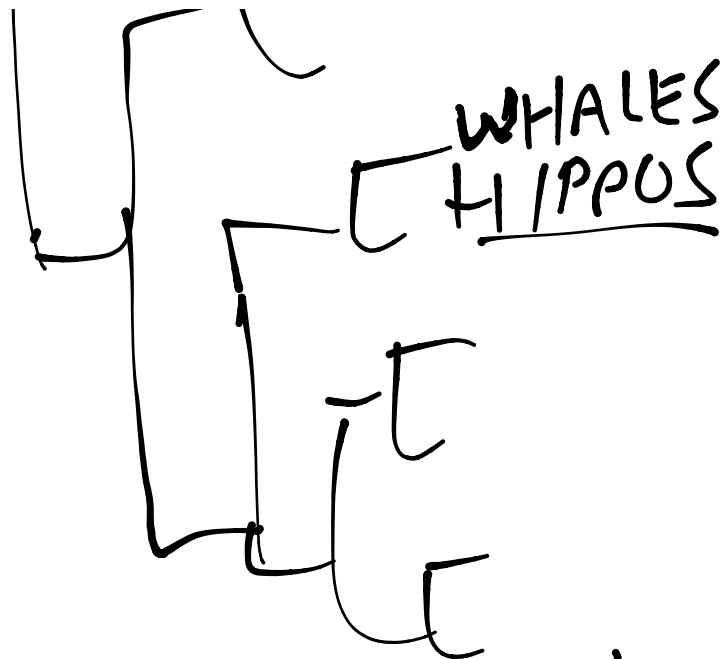
BEAR → STARTS TO SWIM

FOSSILS THEN FOUND OF AMBYLOCETUS WHALES WITH LEGS

BUT WHERE DID THEY COME FROM??

IN ZIMMERS BOOK HE INCLUDED WHALE FOSSIL TREE AND THEN SCIENTISTS TOLD HIM ABOUT NEW PAPER

—
—



- BUT PALEONTOLOGISTS
SAID "NO" "NO"
"NO"

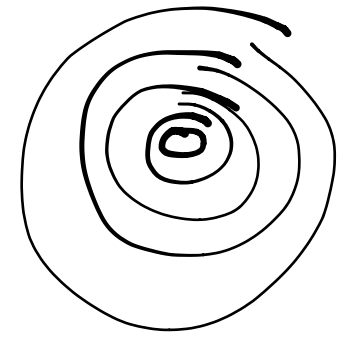
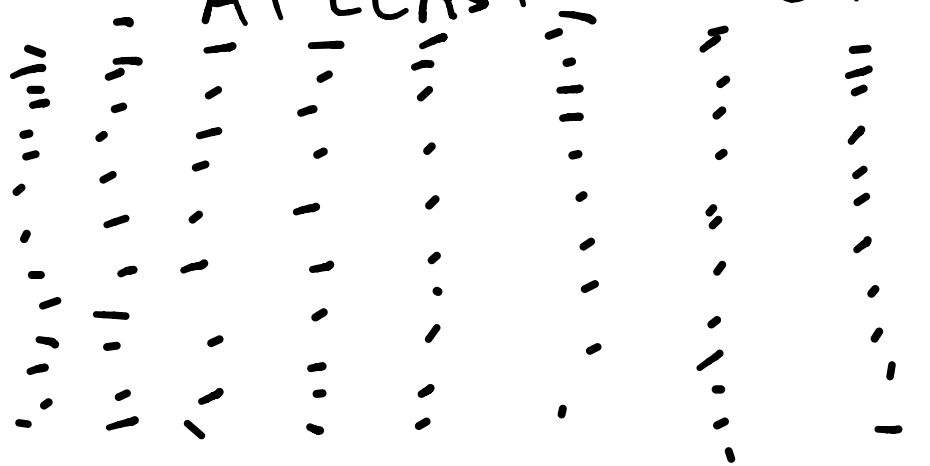
- They had not yet
found a whale ankle

- What is amazing is just
how little DNA it took
to change this picture

...ACATGCCTAGGTACC...

AND THEN H.FLY

"MIND BLOWING"
AT LEAST IN BIG PICTURE



- BUT WHAT THAT TOLD US WAS LESS CLEAR
- GENOMES WERE IMPRESSIVE BUT VALUE UNCLEAR
- REACHED ITS APEX w/ COLLINS VENTER, CLINTON "CHANGES MEDICINE FOREVER"

FMB
12

"WHEN DOES FOREVER
BEGIN?"

GENOMES
ONLINE

GOLD

>3000

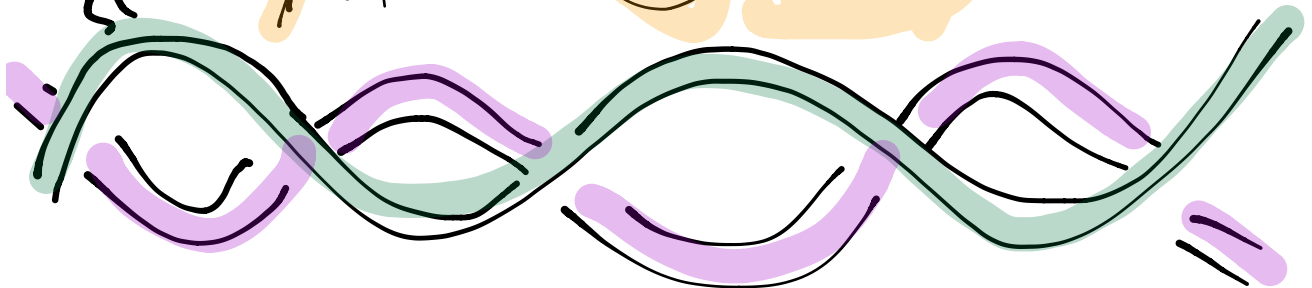
PRESS RELEASE

"1st IRISH GENOME"

YET
ANOTHER
GENOME
SEQUENCE

MAGS

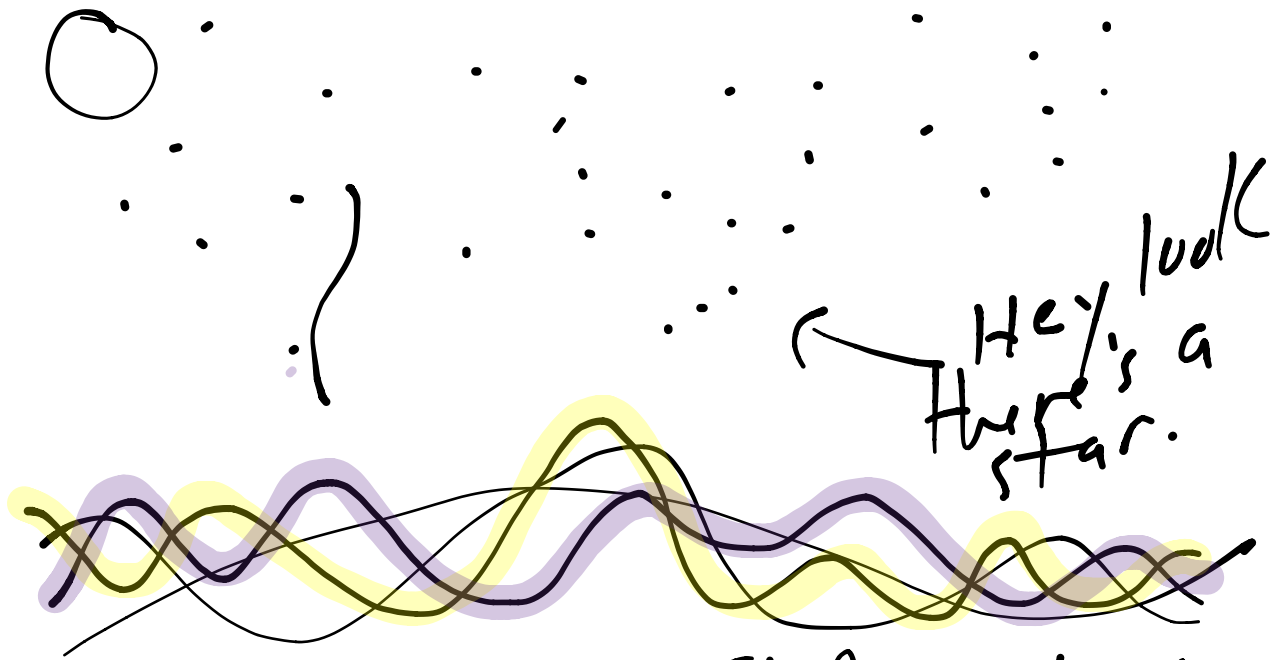
A FULL
BLOWN
IN CASE
2010.



.800 GENE INVOLVED IN

SUNG LEARNING

- what did you expect?
There would be one?



WLG I HAD A FLARE UP
OF YAGS WITH
THE GORILLA GENOME

* GORILLA GENOME COULD
HOLD THE KEY TO ...

THE HUMAN CONDITION
FROM BBC.



But this was
known already.

The reality is that the
gorilla genome added
to what we knew about
lineage sorting.

overselling this leads
to a misleading discovery

to problems... like ~~1/2000~~
INSTITUTE

I AM NOT THE ONLY
PERSON SUFFERING
FROM YAGS.

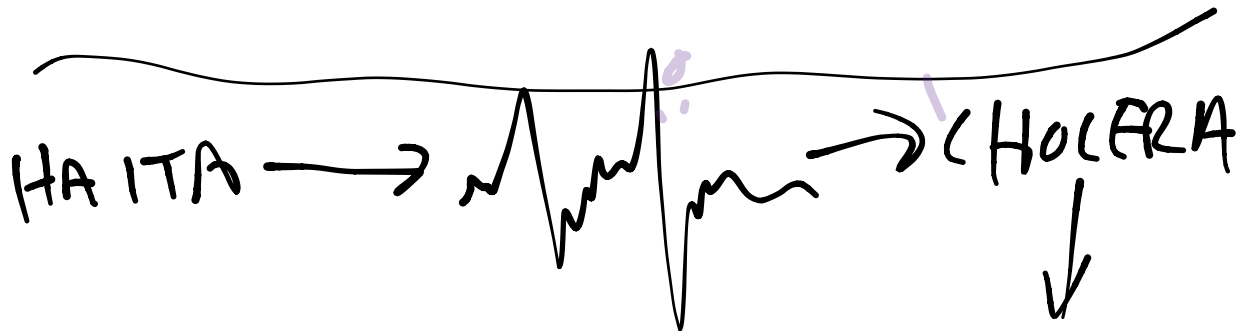


ED YONG... ON FULL
GENOME OF OTZI

BUT NOT TO SAY HE DOESN'T
WRITE ABOUT GENOMES

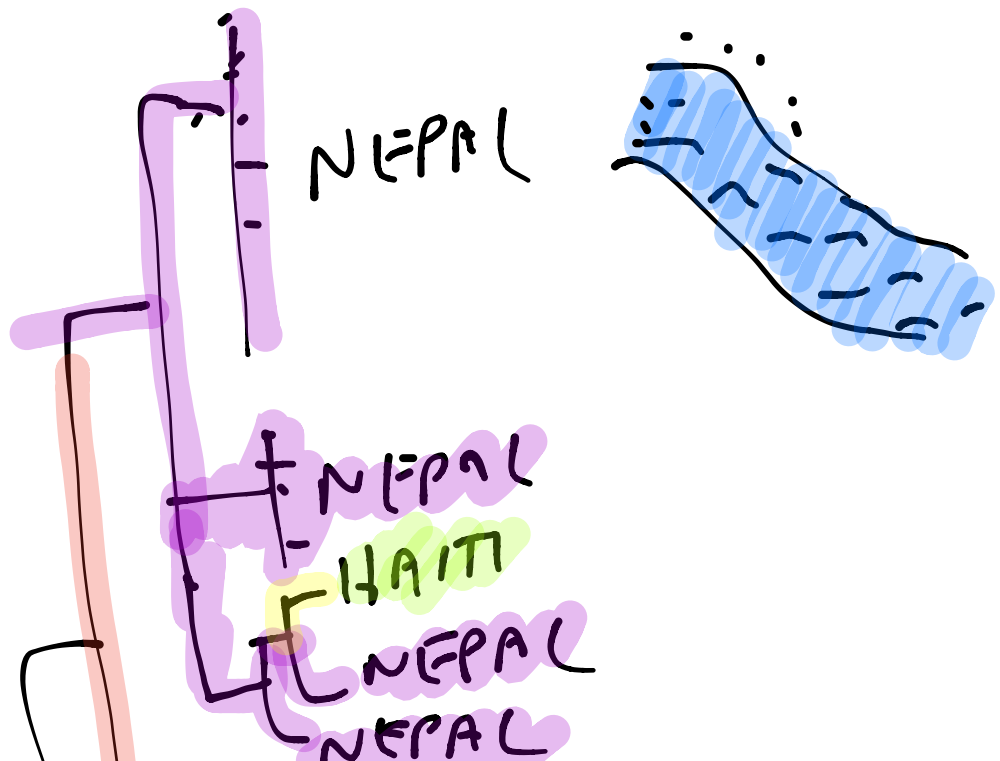
... HE WRITES ABOUT

HELPS HOW THE VIRUS...
GENOMES



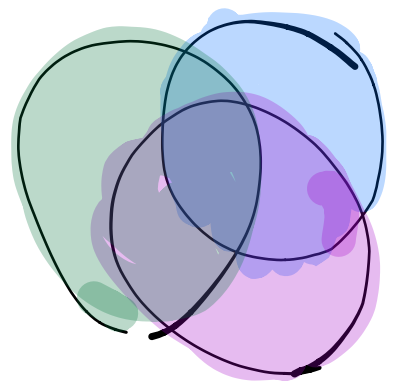
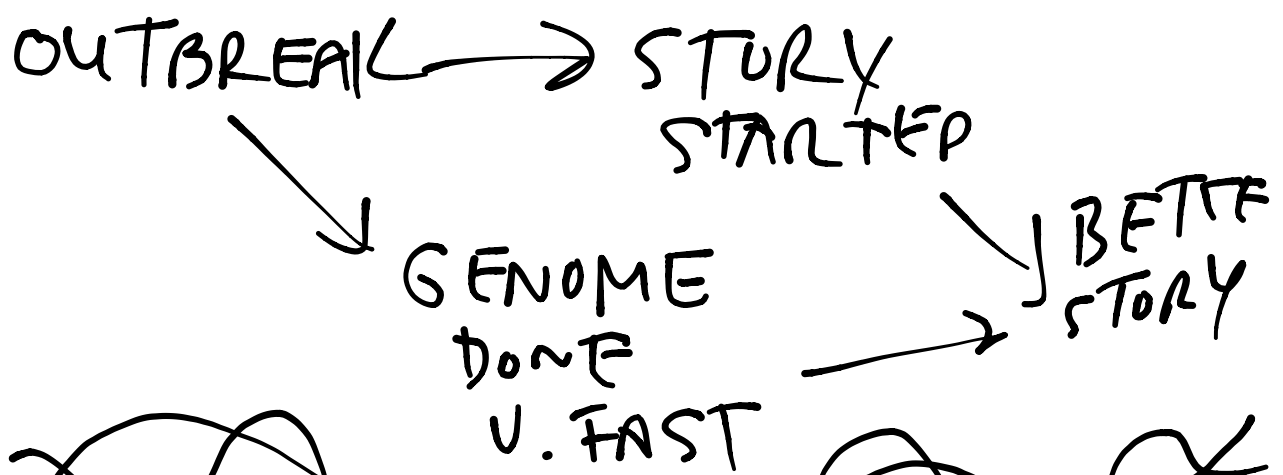
HOW DID CHOLERA
GET THERE??

PAUL KIEM in MBIO



BANGLADESH

~~|||||~~
E. COLI IN GERMANY



ICONIC
IMAGES
OF GENOMICS

net

..... PANGENOME

95%



NEWS

genomes

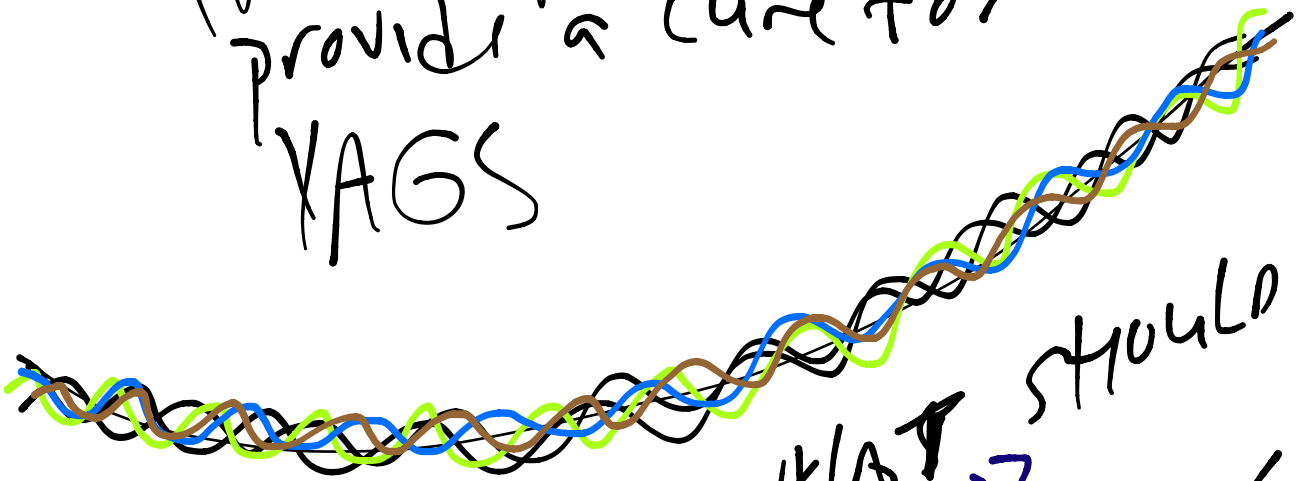


A REVOLUTION?



- in 1600's... microscopes
provided revolution
b/c allowed seeing
new things

- that kept in mind should
provide a cure for
YAGS



DAN ASKS... WHAT SHOULD
SCIENTISTS DO??

CHIEF REINER ASKS

STEVIE DEPT. V.
ABOUT PRECISION

~~GWAS~~

NO TRAINING
ON OUTREACH
WRITING } other than writers
SPEAKING } the people I
 } know who
 } write the most
 } are scientists

WHAT DO YOU DO??

What do you do?
Why?

SCIENTIST
ARE NOT
JUST ROBOTERS.

CITIZEN SCIENCE
IN GENOMICS



IT'S A
GAME

FRAGILES

CAA CAA
CAT AAA
CAATAA
GAATAA

WHY DOES BIOINFORMATICS
GET LOST