

# Inbreeding Depression

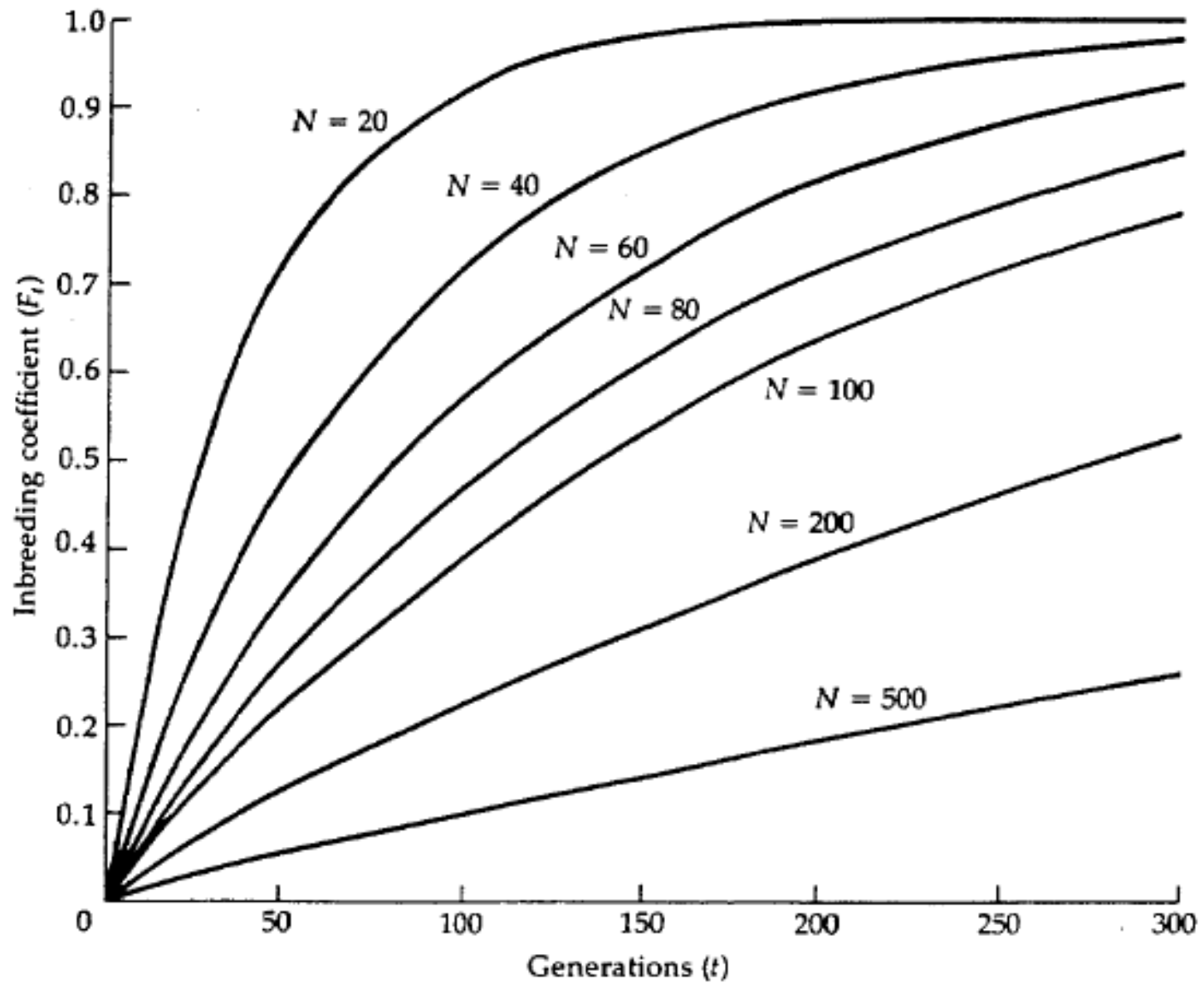
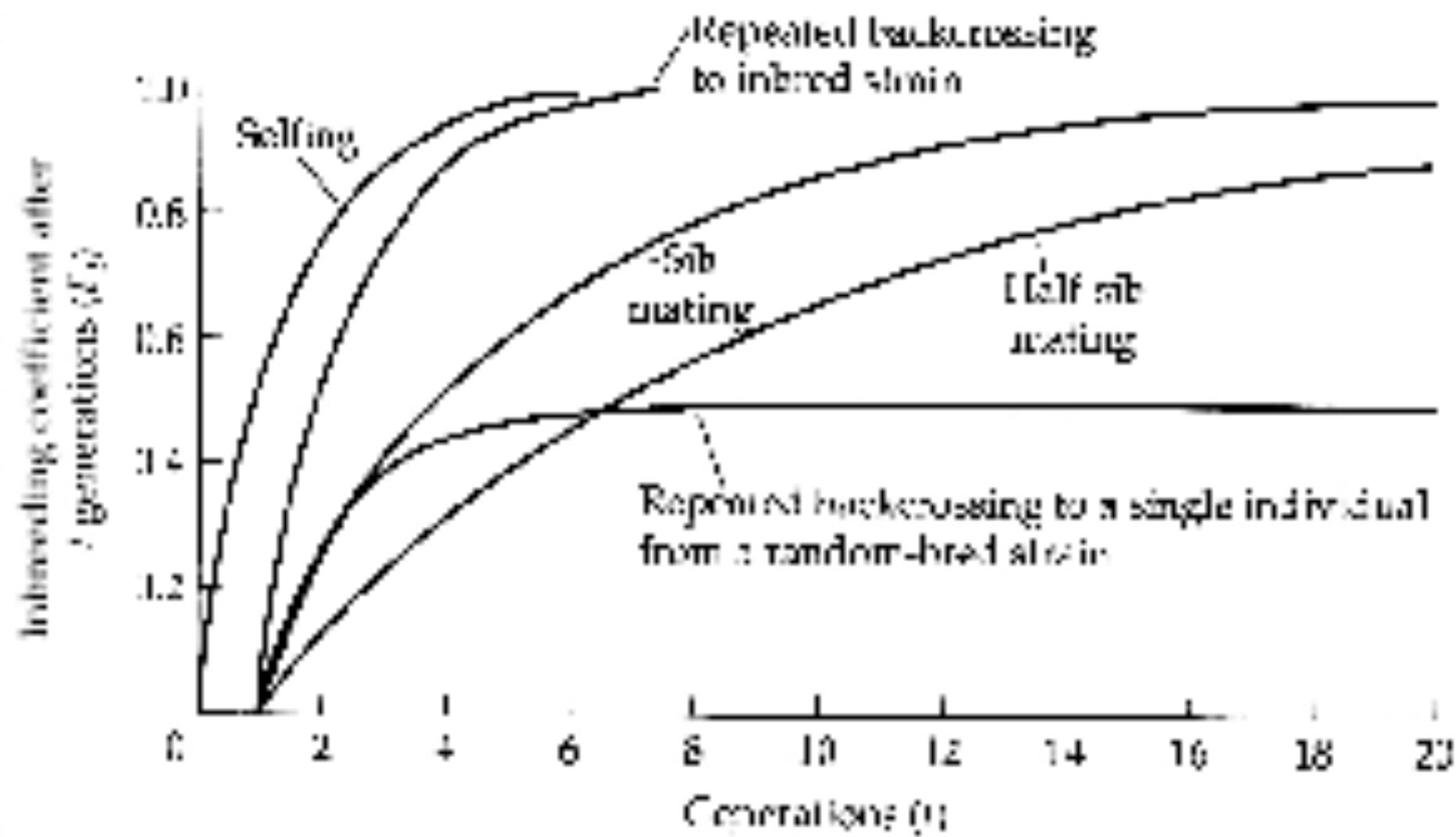


Figure 9. Increase of  $F_t$  in ideal populations as a function of time and effective population size  $N$ .



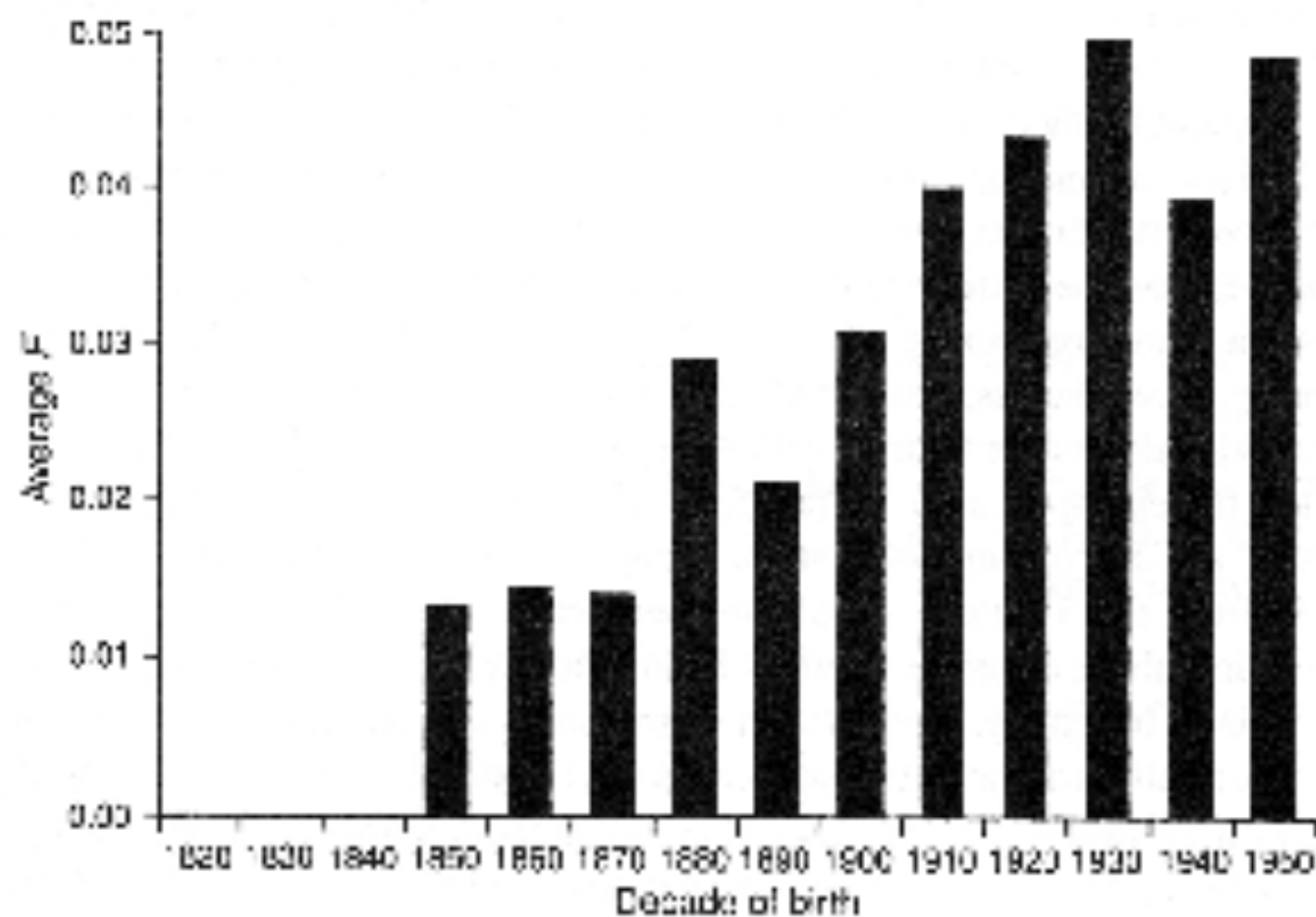


Figure 3.6. Average pedigree inbreeding coefficient for human population on Tristan da Cunha as function of decade of birth.



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- Need to specify level of inbreeding
  - Juvenile survival of Dorcas gazelle
  - Sib matings ( $F = 0.25$ ) = 0.405
  - Outbred population ( $F = 0$ ) = 0.720

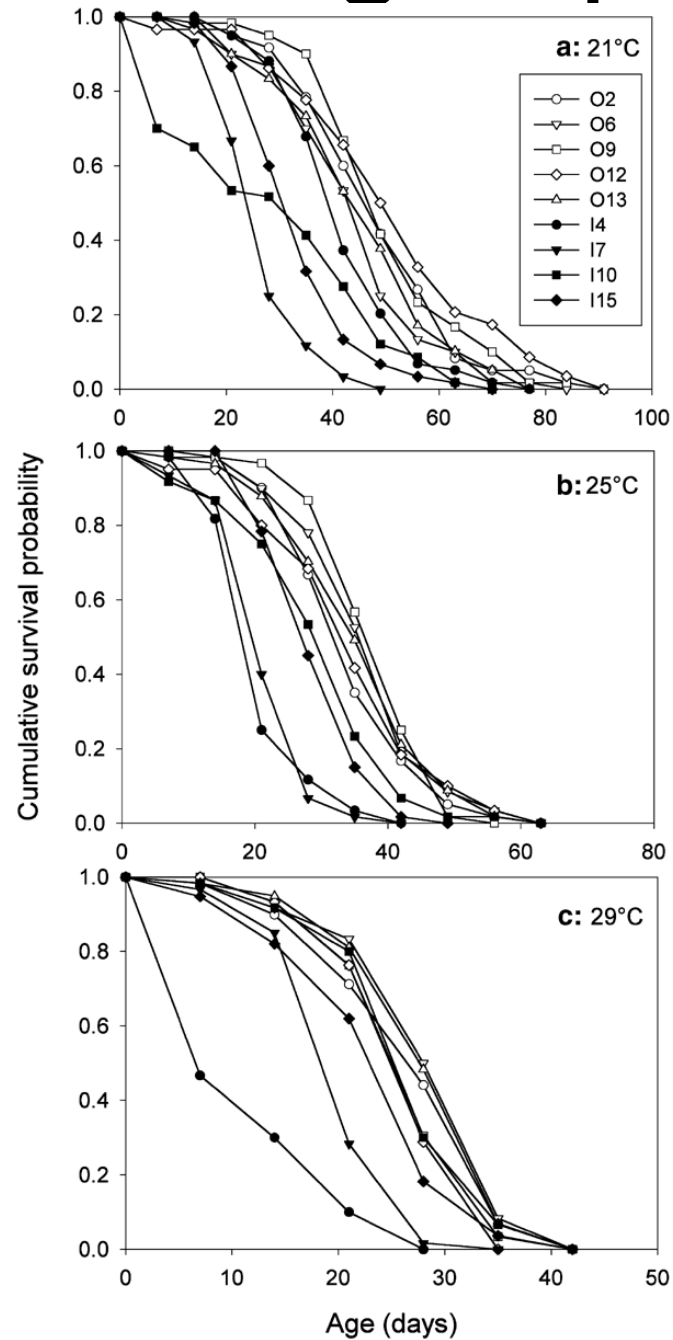
$$\delta = 1 - \frac{0.405}{0.720} = 0.44$$



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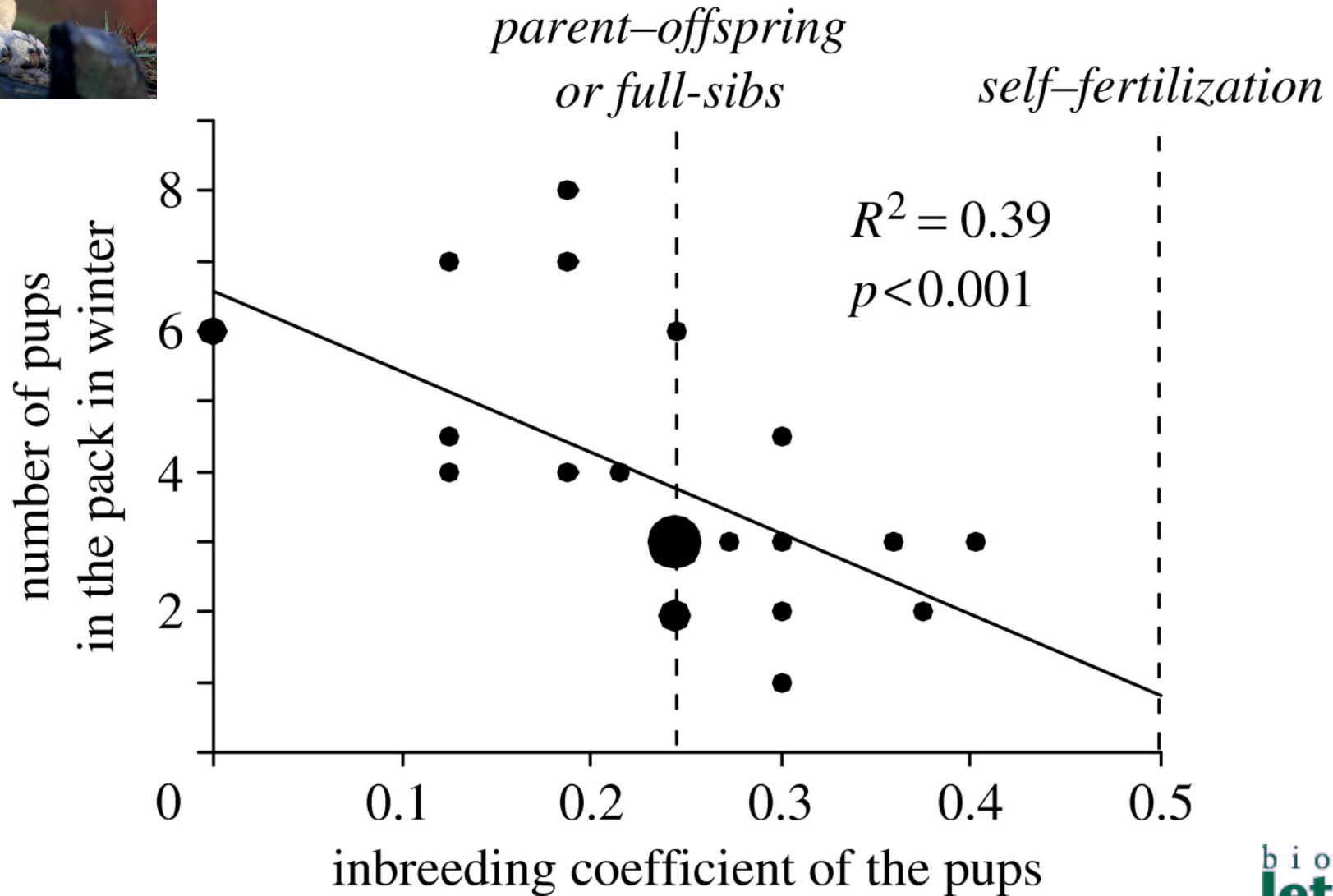
- All components of reproductive fitness subject to ID
- Characters closely related to reproductive fitness show more ID than peripherally related characters
- ID greater for total fitness than its components
- Families, populations, species differ in extent of ID
- ID proportional to amount of inbreeding

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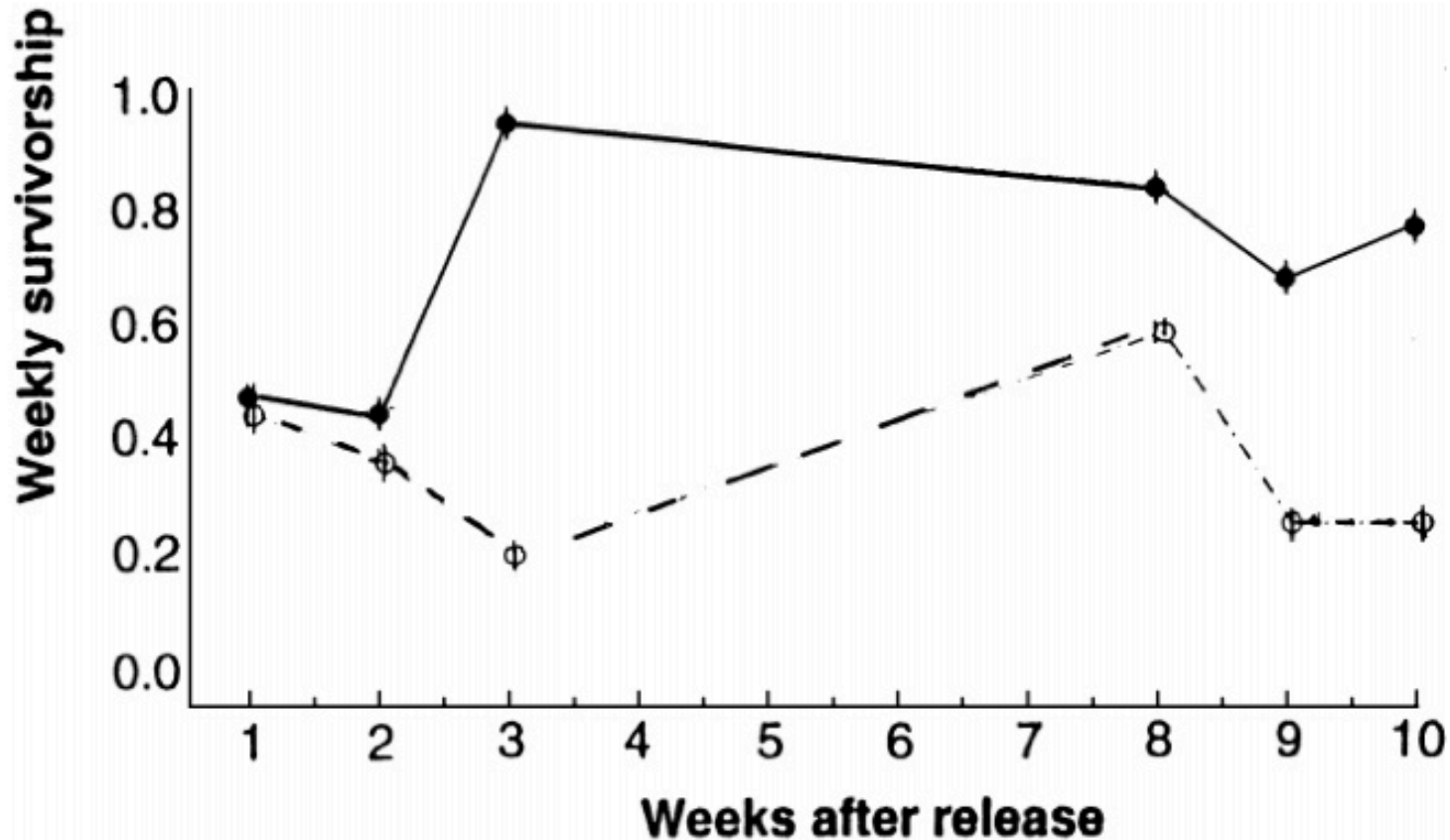




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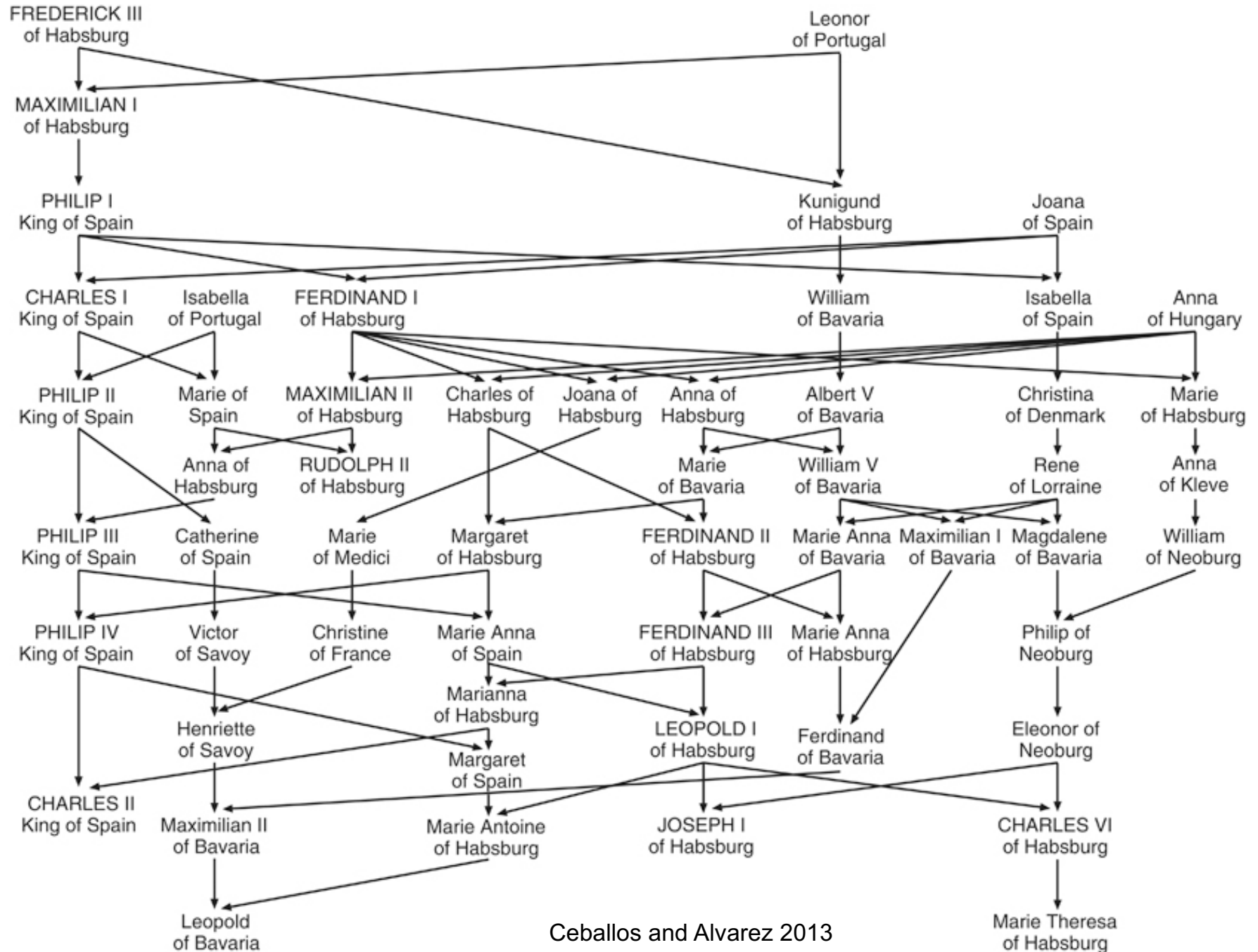


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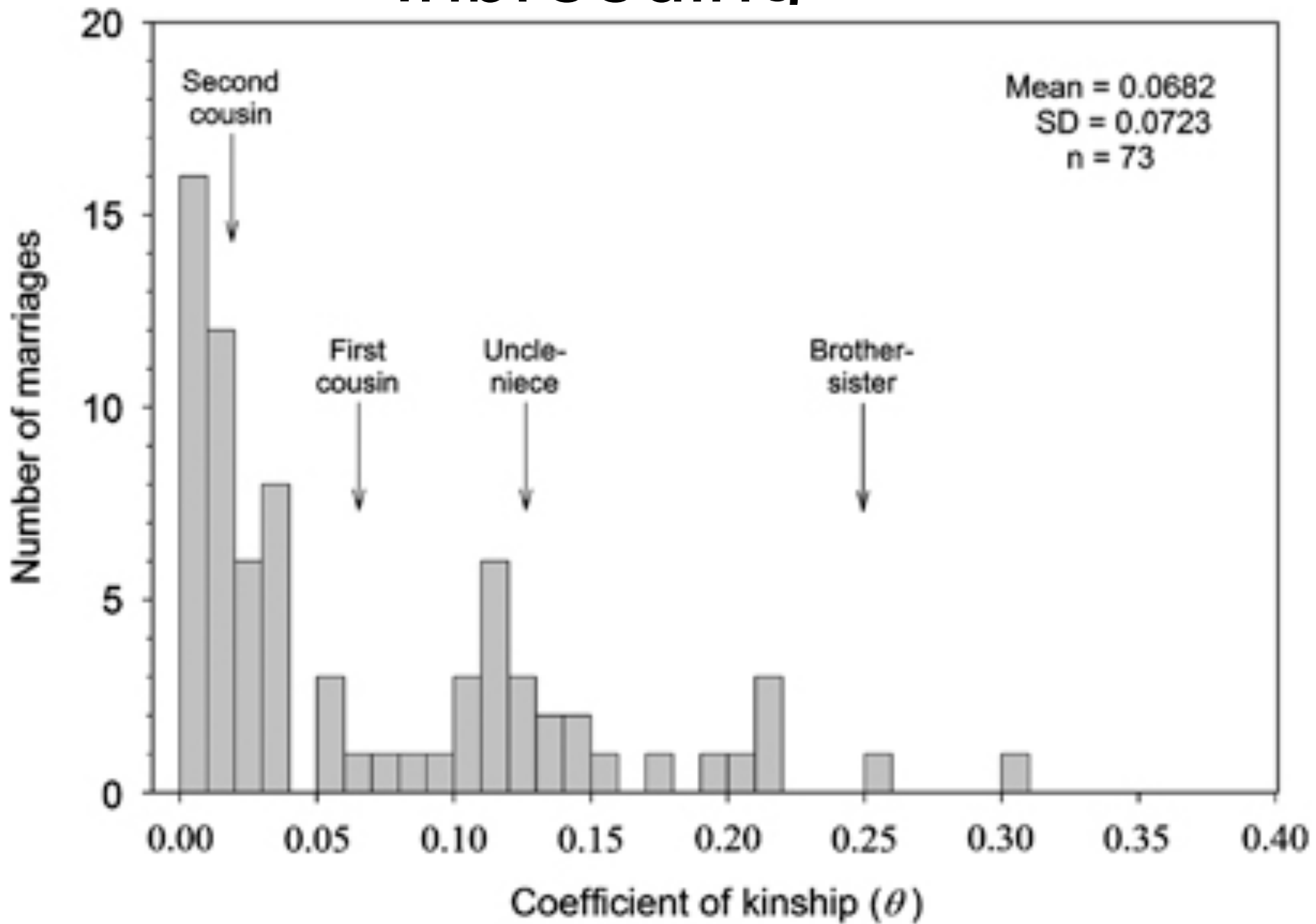


**Figure 1** Weekly survivorship of non-inbred (solid line) and inbred (broken line) white footed mice over 10 weeks in a natural habitat (from 41).

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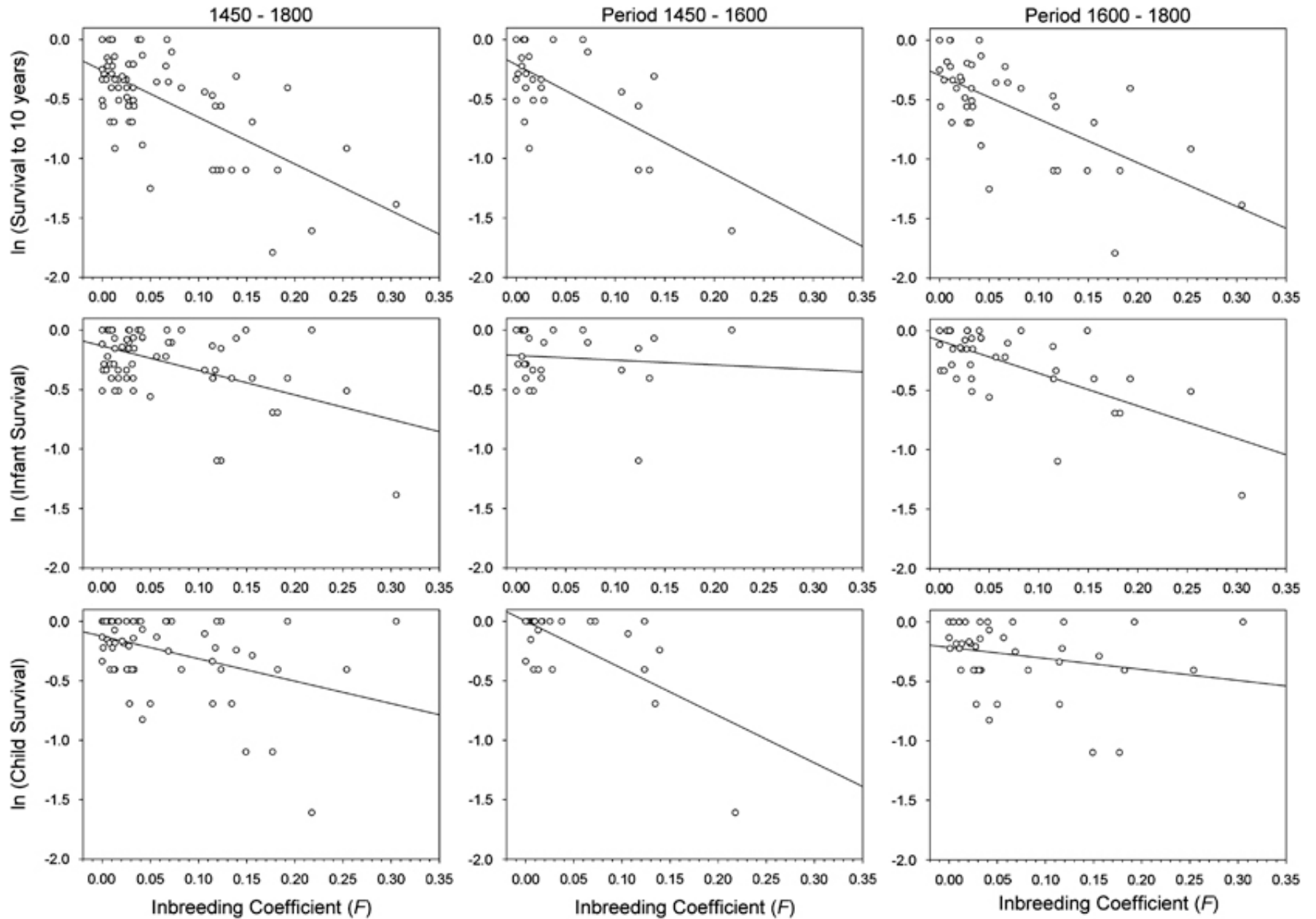


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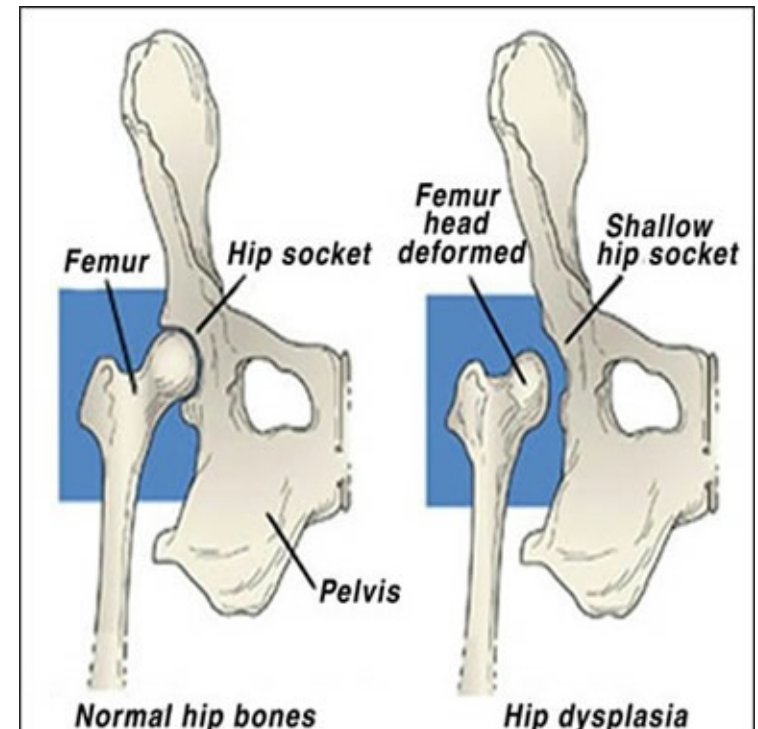


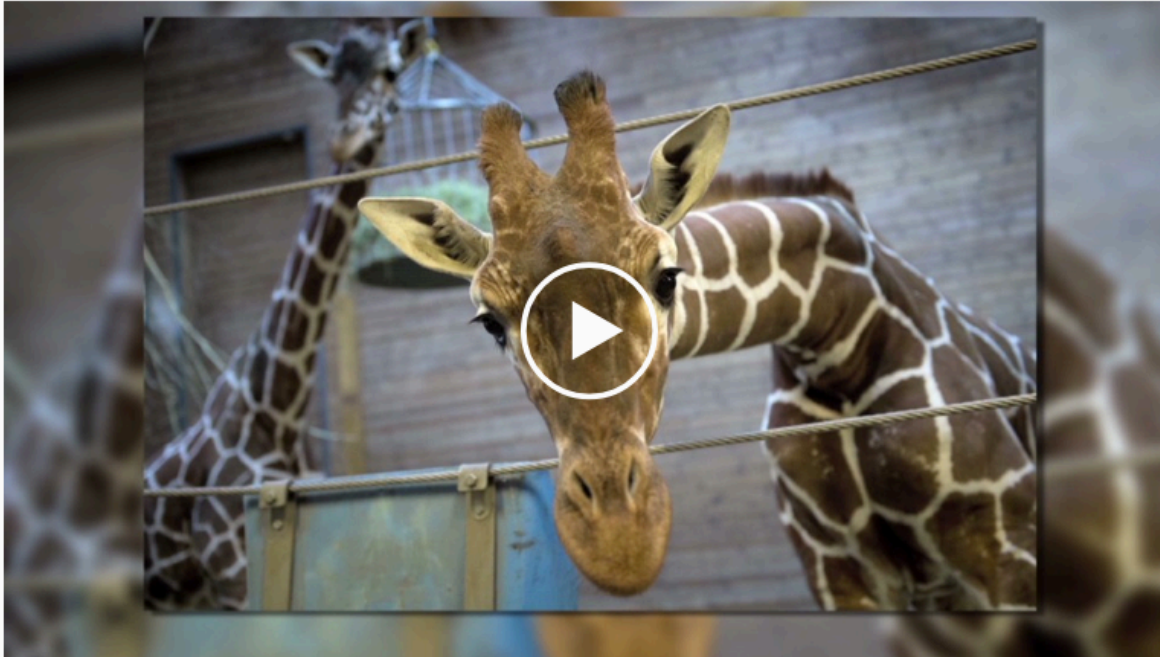
Table 1: Correlation values of different traits with inbreeding coefficient in tiger population

Traits	Correlation value	t-test value
Birth weight	-0.48447	0.48447
Age at first calving	0.142821	0.721499
Age at first mating	0.141793	0.716199
Parity	-0.22267	1.14201
Total number of cubs born in life time	-0.13914	2.48959*
Total number of cubs live upto weaning period	-0.217848	3.9673*
Age at death	-0.29715	5.26559*
Litter size	0.241375	4.599642*
Number of white cubs born in life time	-0.03921	0.69538
Number of normal cubs born in life time	-0.02057	0.36452
Gestation period	0.065128	0.32633
Sex ratio	0.040916	0.204749
Average interparturition period	0.048503	0.242803

# Danish zoo kills healthy giraffe, feeds body to lions

By Bharati Naik and Marie-Louise Gumuchian, CNN

🕒 Updated 8:57 AM ET, Mon February 10, 2014



Danish Zoo criticized for killing giraffe 02:21

## Story highlights

**NEW:** Copenhagen Zoo official: If we sterilized giraffe, he'd just take up needed space

Giraffe's autopsy performed outside in front of people at Copenhagen Zoo

An online petition to save a healthy young giraffe from death has failed, despite thousands of signatures from animal lovers.

[Copenhagen Zoo](#) said it euthanized the male, named Marius, on Sunday because of a duty to avoid inbreeding.