

# Genetic Insights for the Future of Beavers in England

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*Beavers Across Britain 2026 – Science, Practice and Policy*

## Genetic Insights for the Future of Beavers in England



Eurasian beaver went extinct in Britain between 12<sup>th</sup> and 16<sup>th</sup> Century



Official reintroductions into Britain began in 2009 in Knapdale, Scotland



Unofficial releases also occurred in both Tayside, Scotland and various locations across England



Studies have looked at the long-term viability of beavers in England including the 2015-2020 River Otter Beaver Trial

## Genetic Insights for the Future of Beavers in England



In 2025 Defra published a policy paper outlining the governments approach to the wild release and management of beavers in England



To support this policy Natural England are assimilating a broad range of studies to develop best practices including the genetic management of beaver populations



A better understanding of underlying genetics is important to understanding and mitigating risks to beaver populations in England

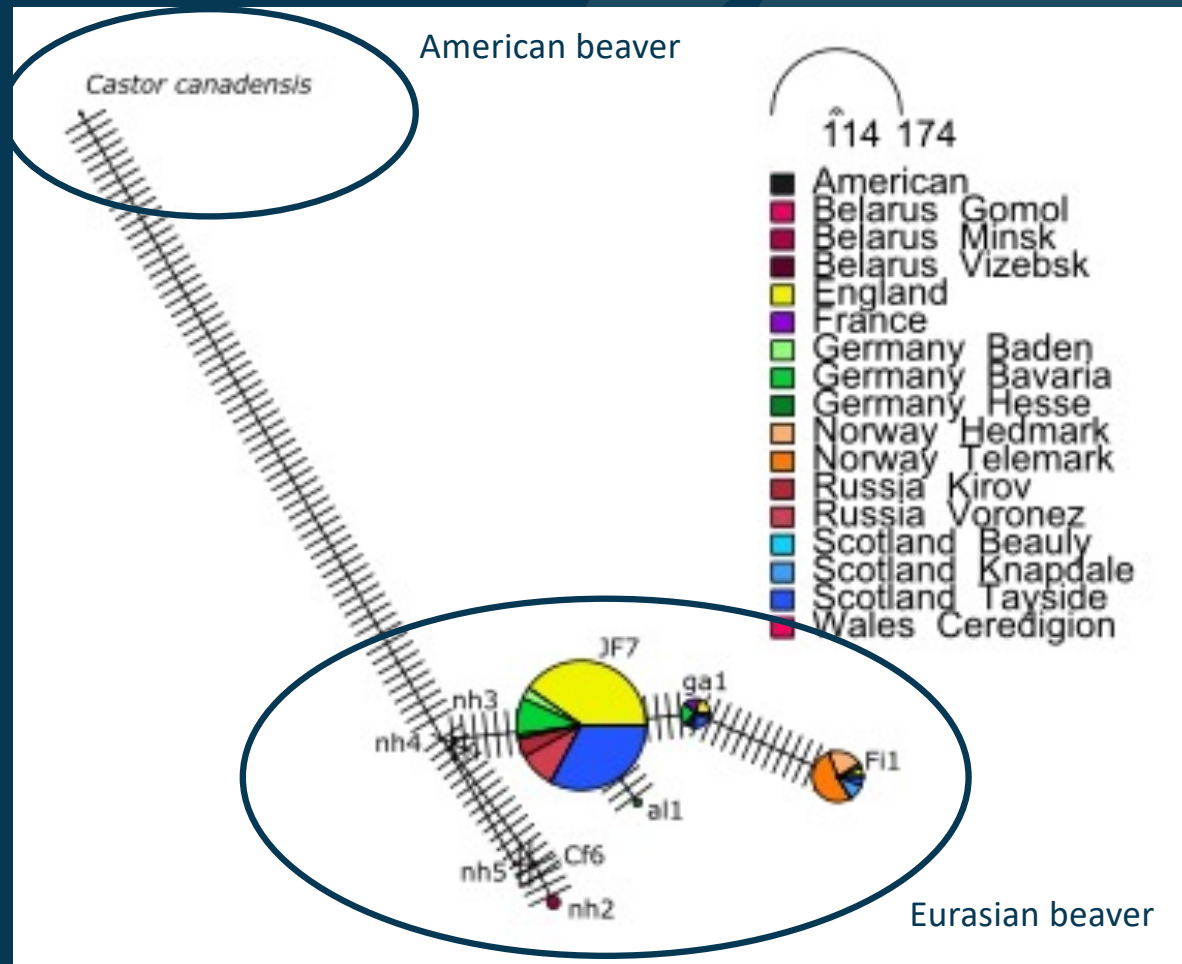
## Using genetic tools we can answer some key questions:

1. Are wild living beavers in England Eurasian beavers?
2. Where did wild living beavers in England come from?
3. How do the beavers in England compare to those in Scotland and mainland Europe?
4. Are beavers in England at risk of genetic complications?

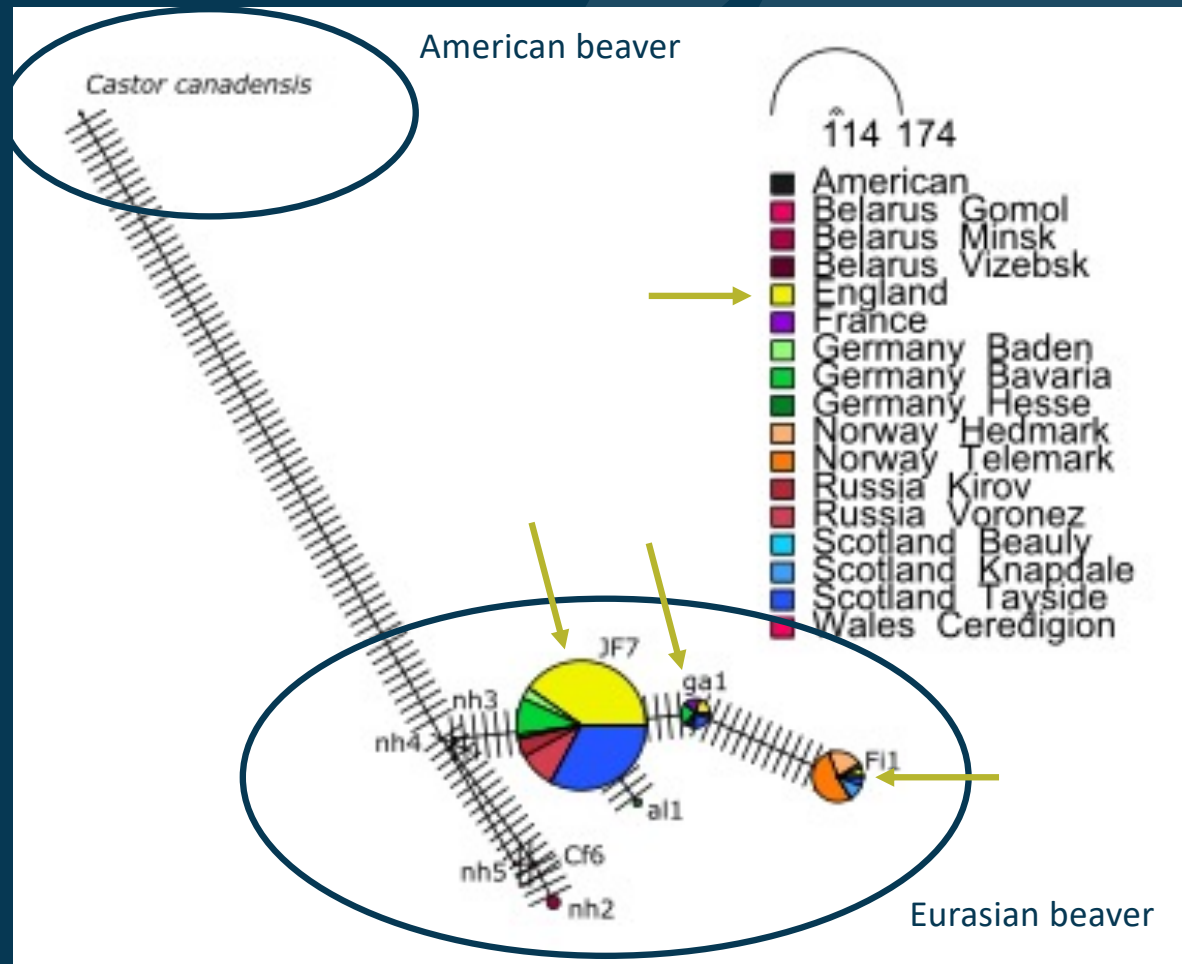
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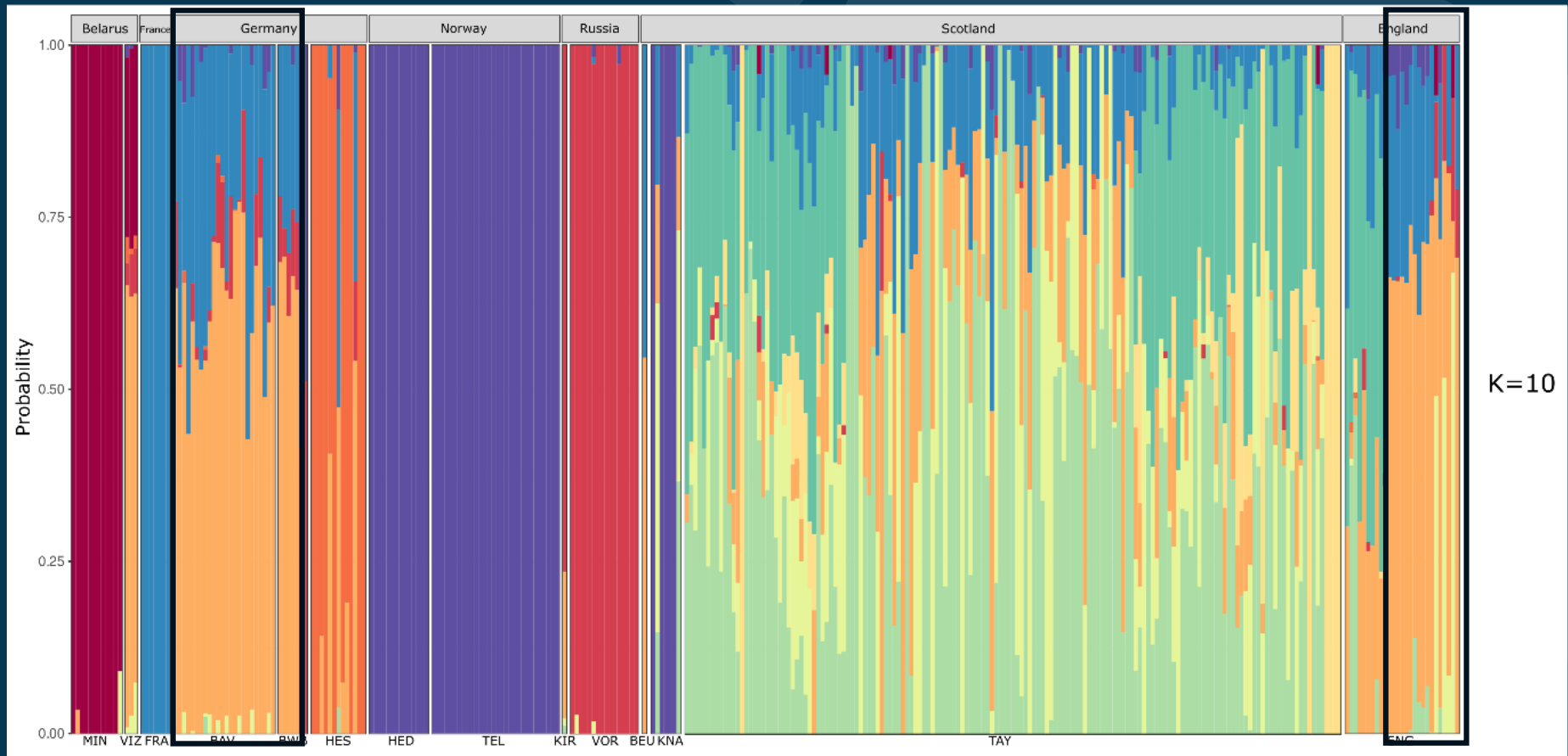
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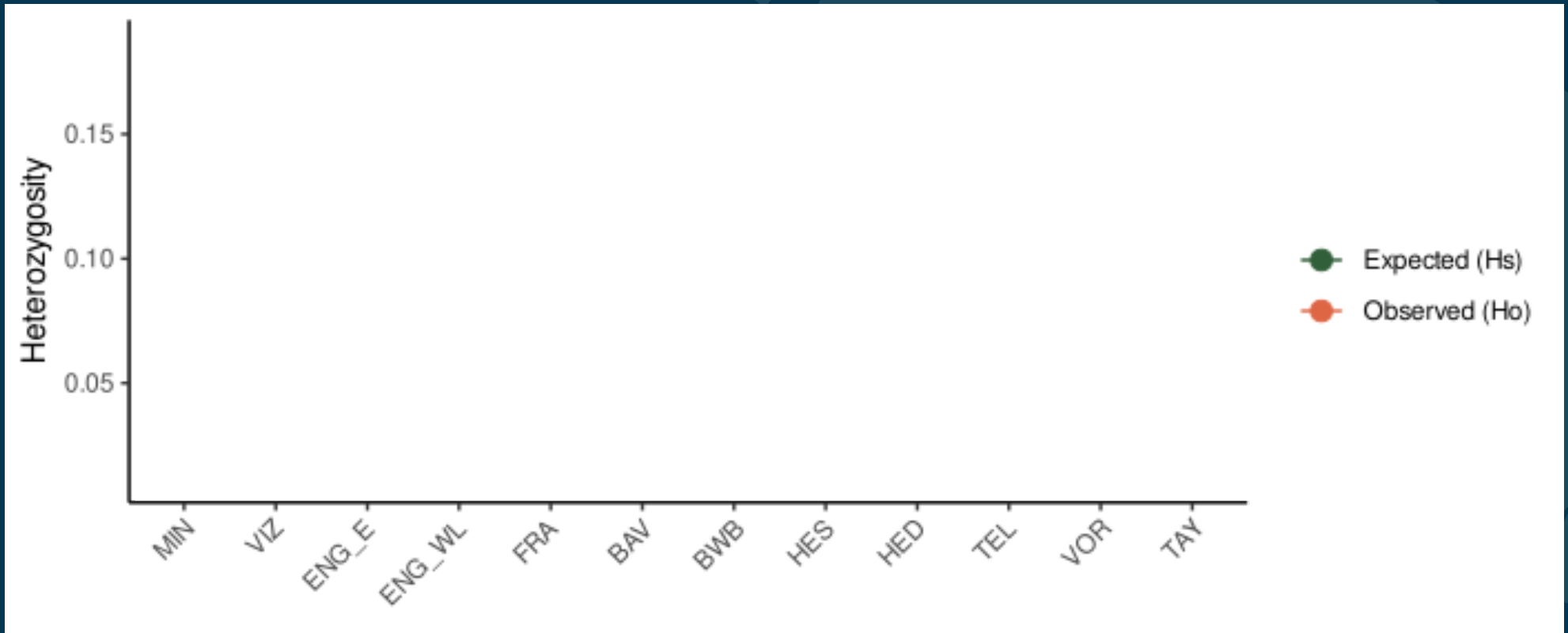




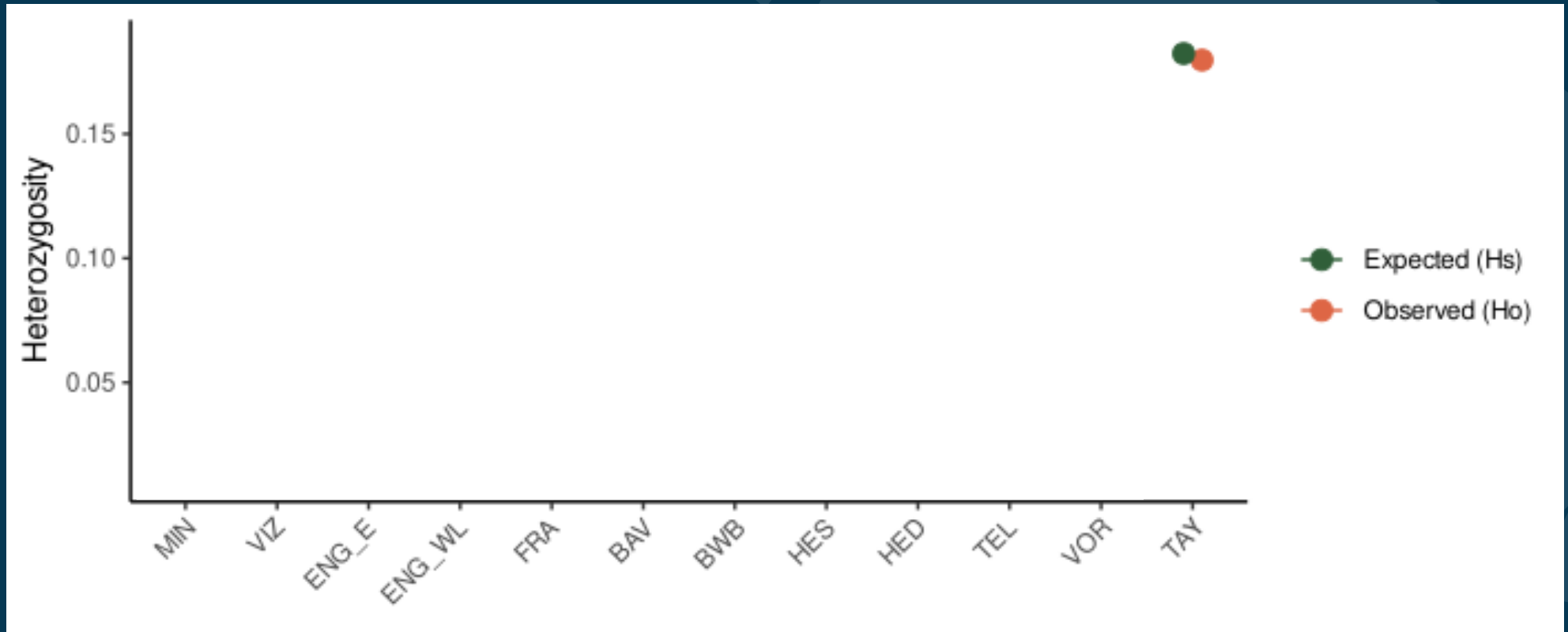
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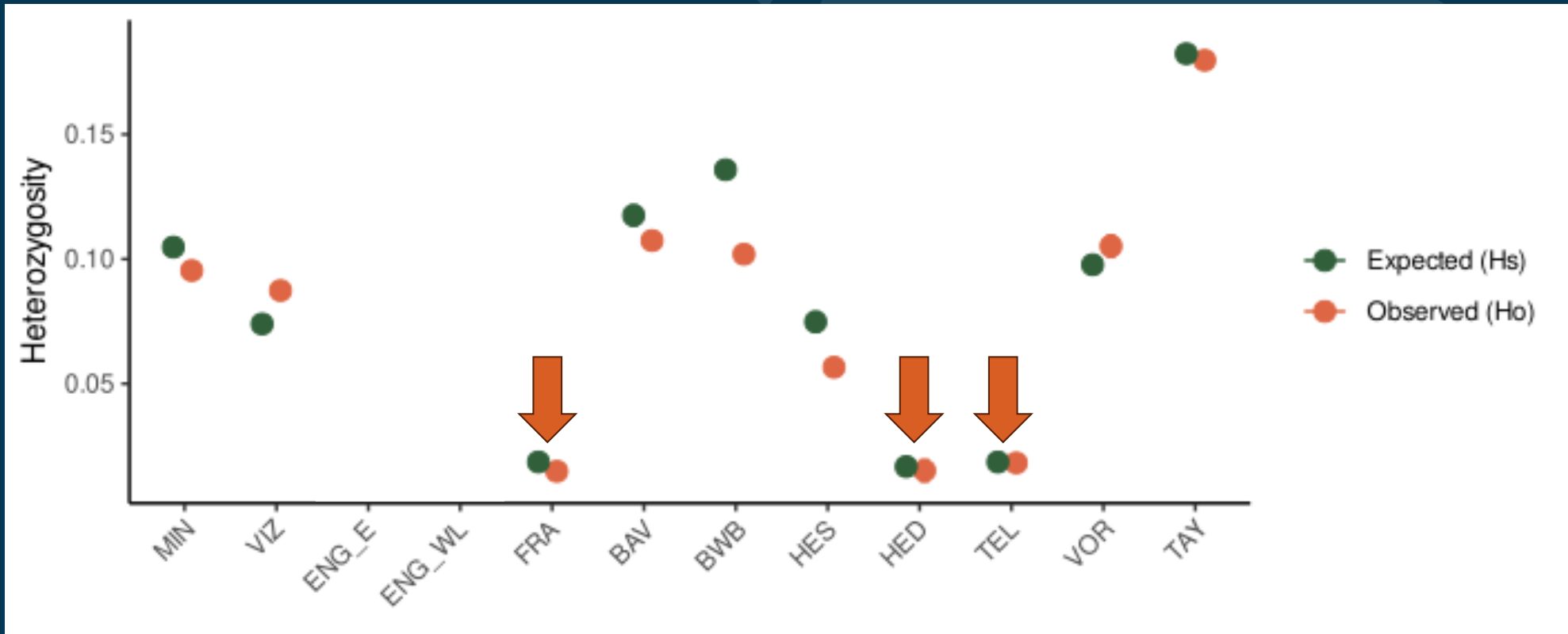
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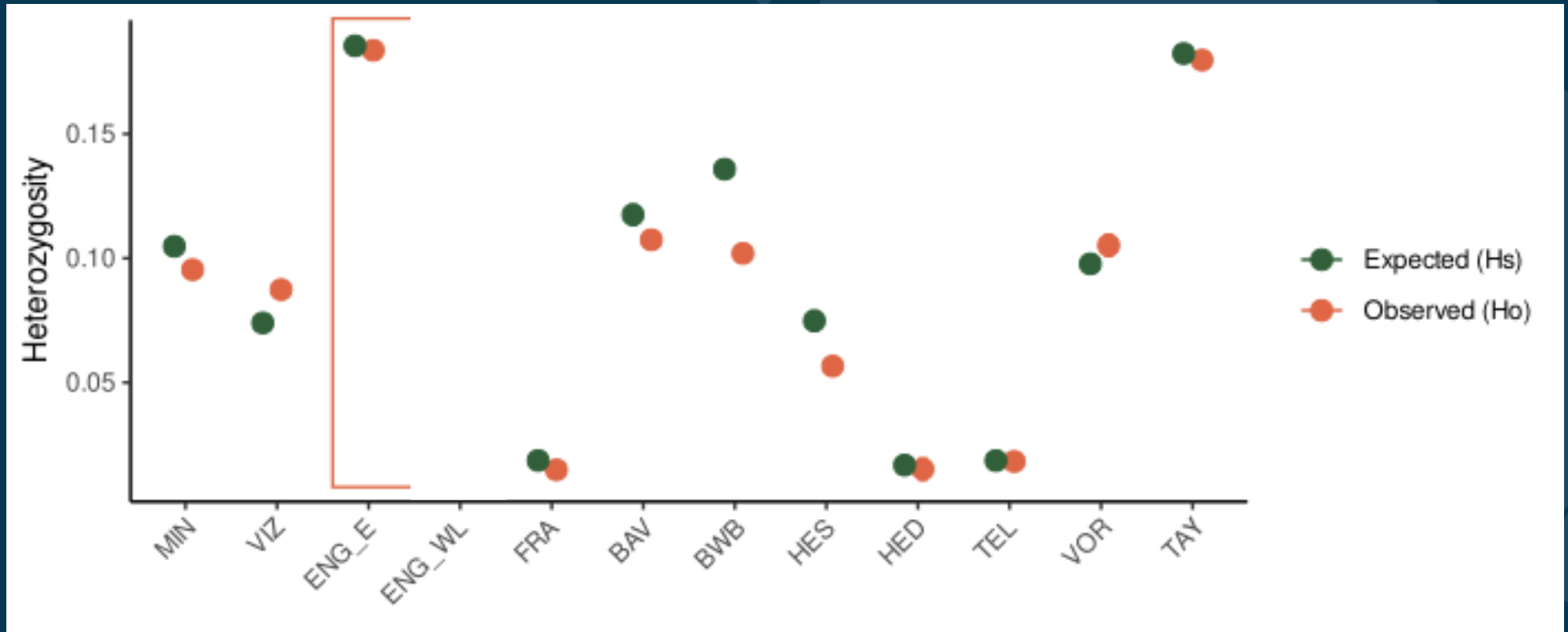
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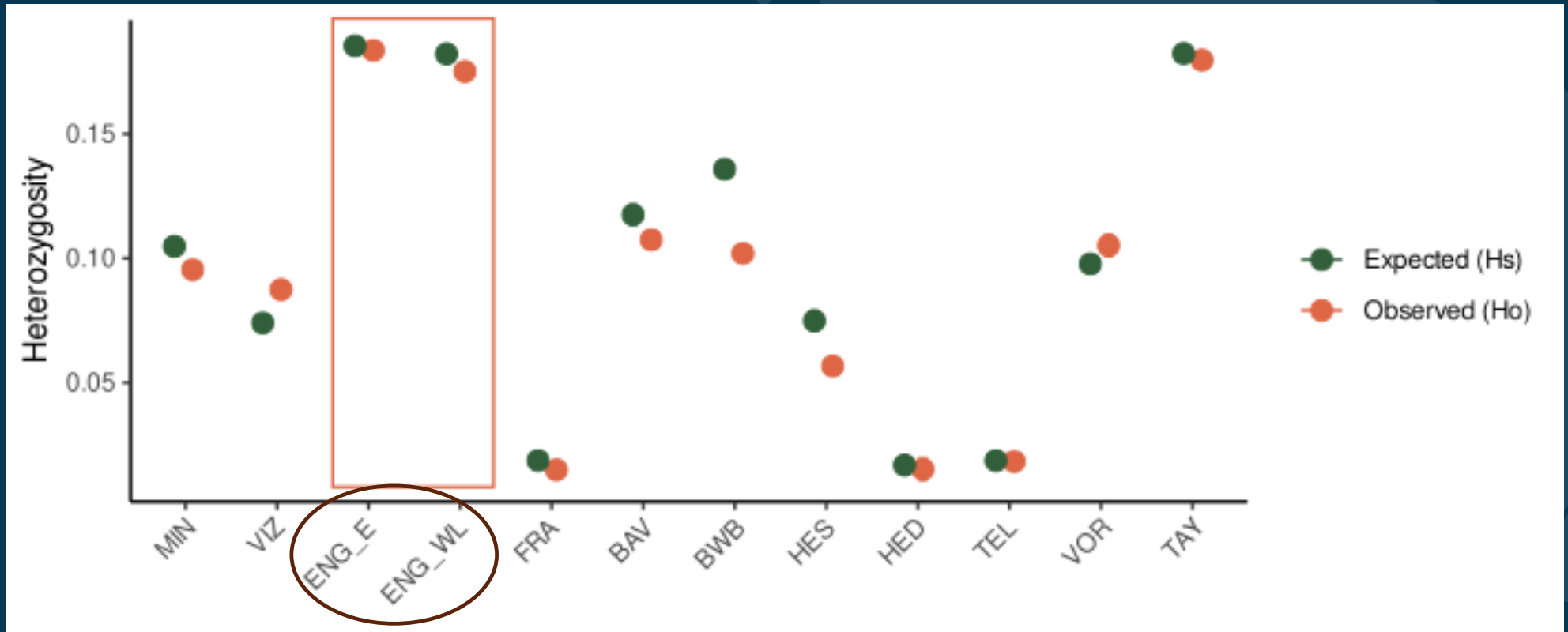
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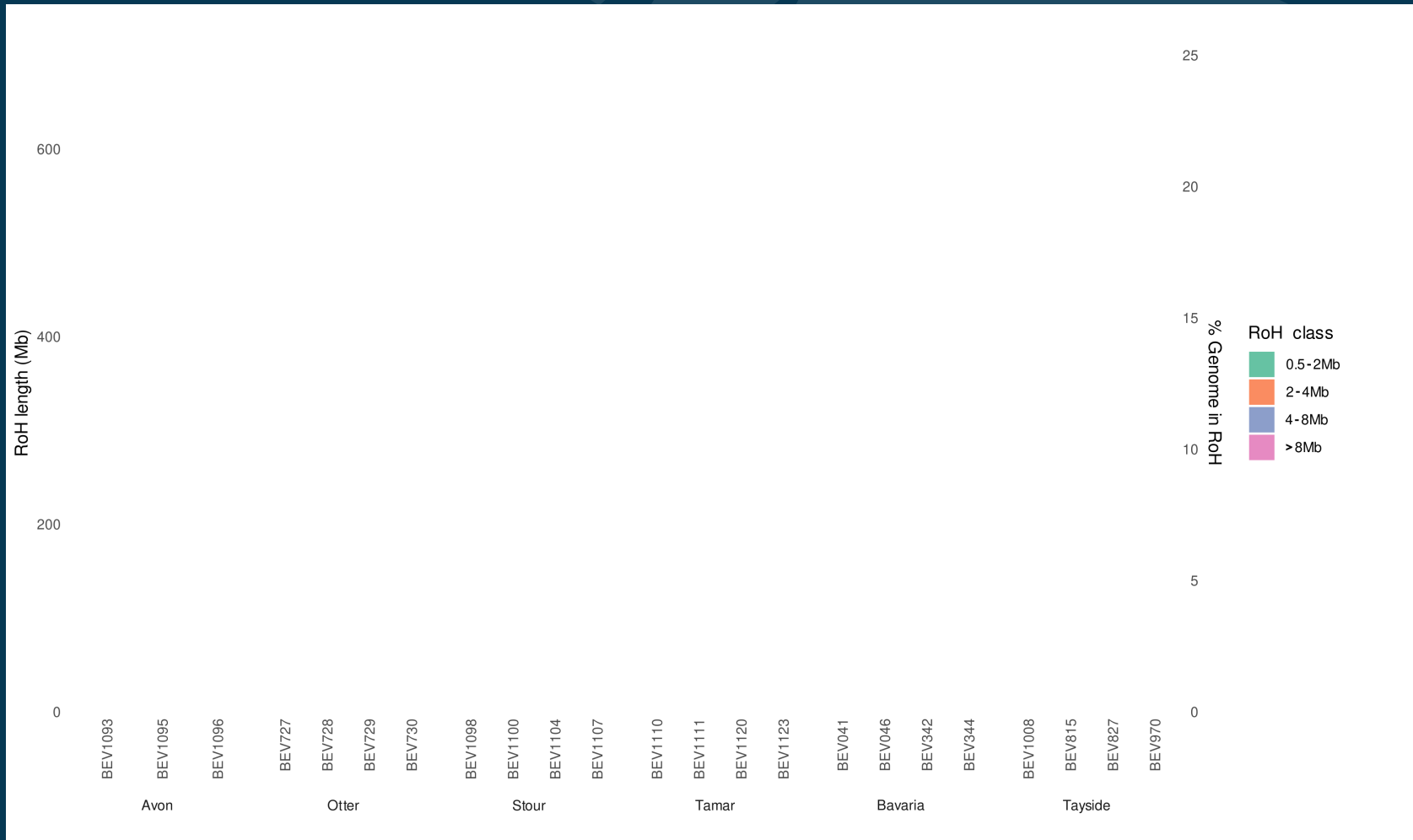
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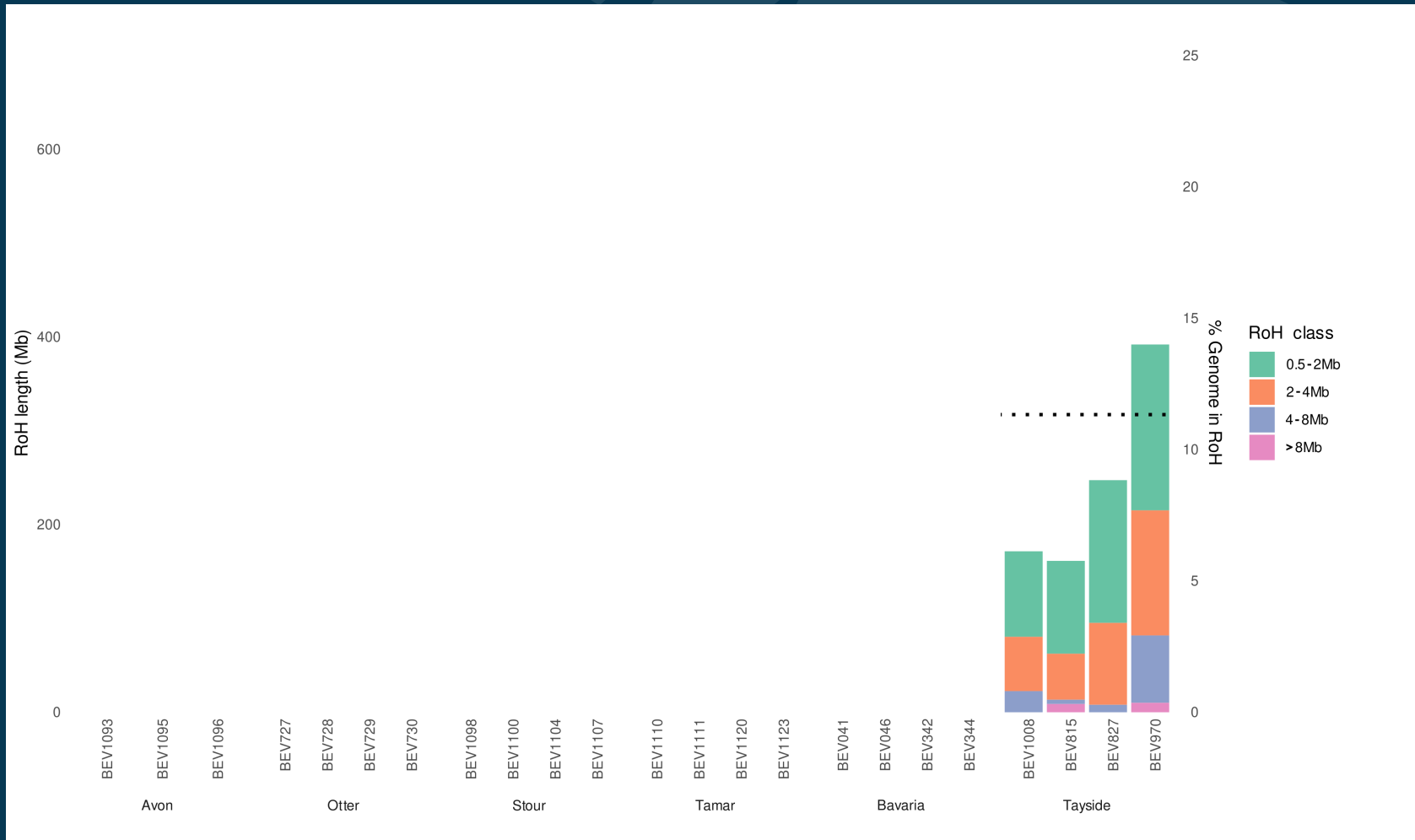
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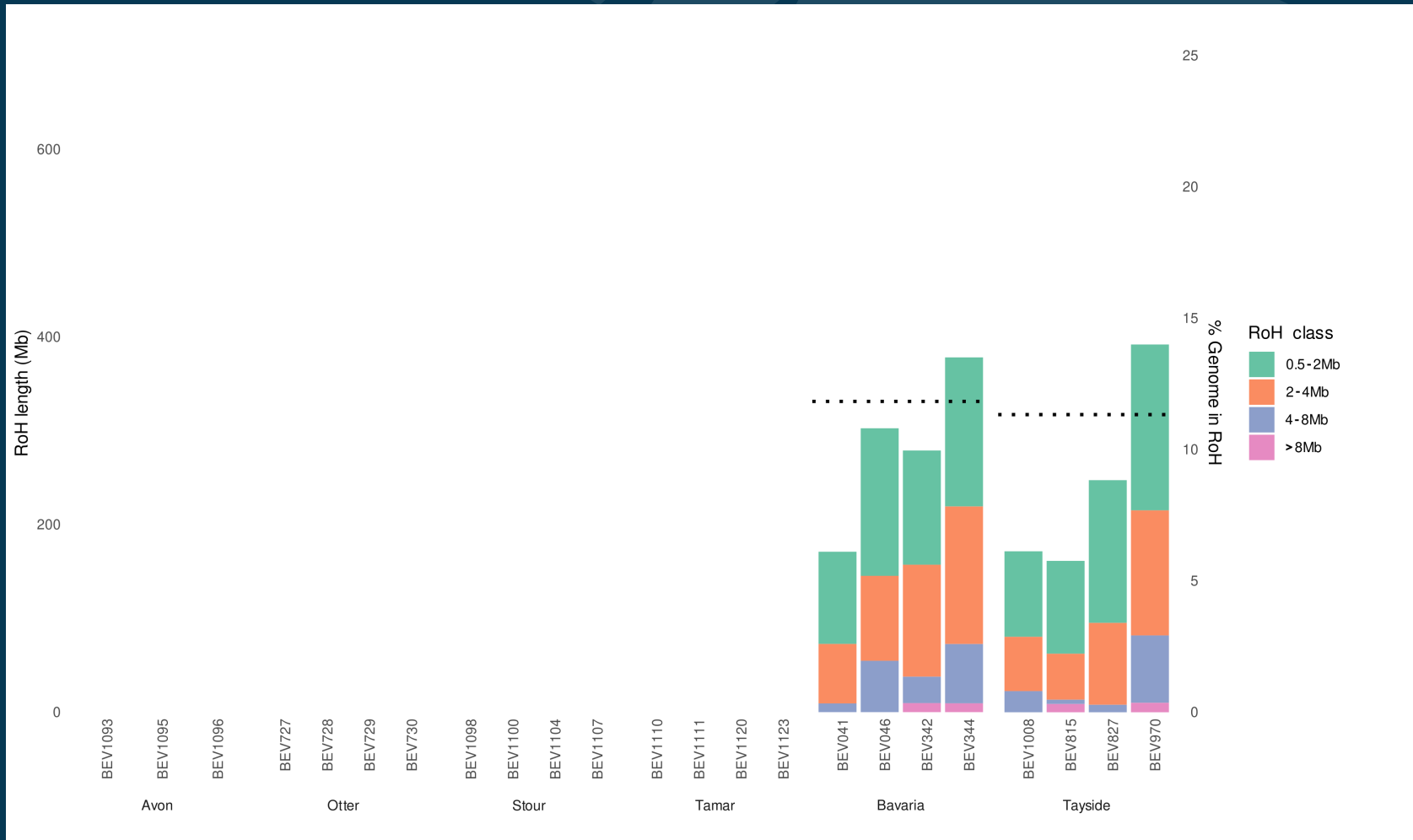
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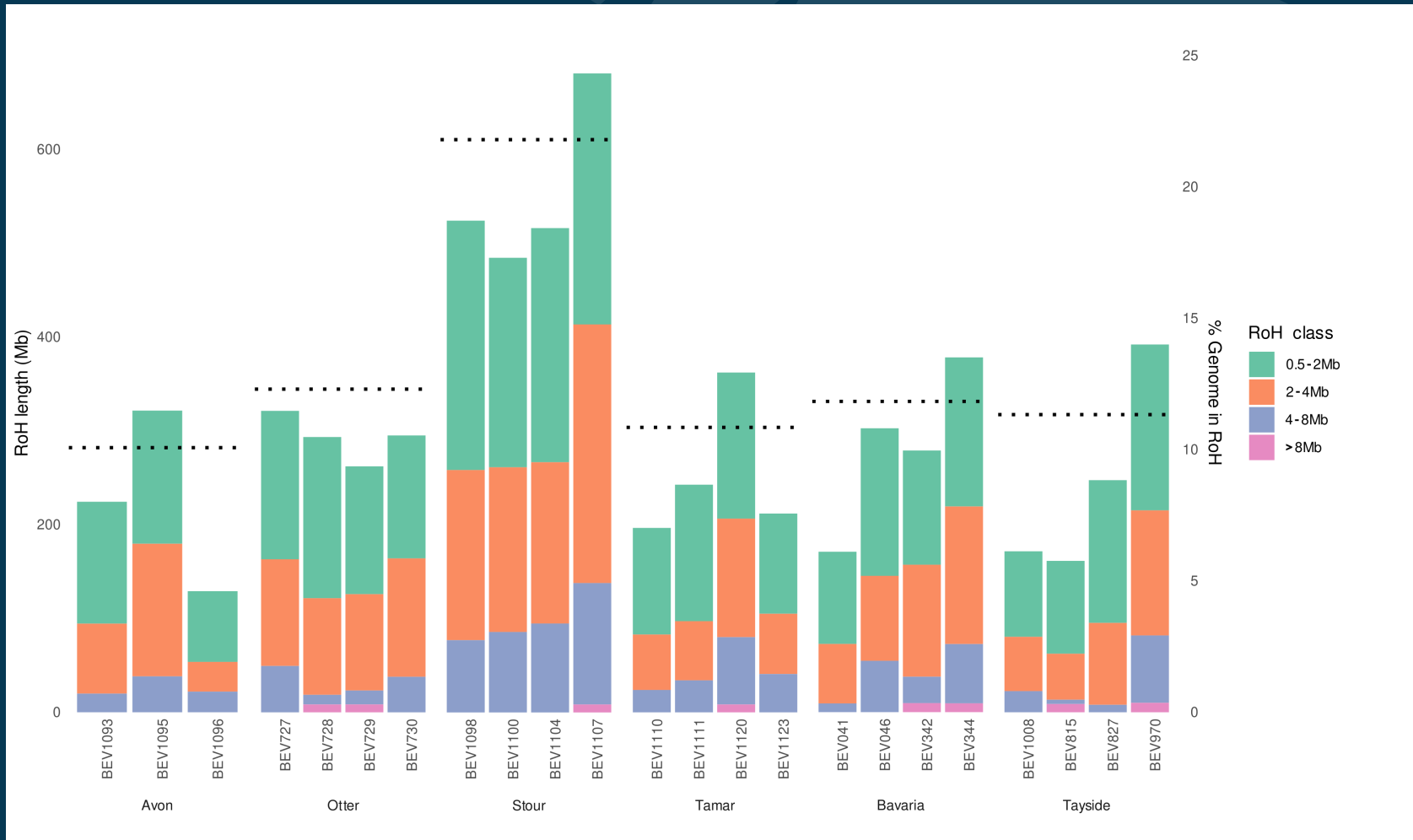
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# What this evidence gives us



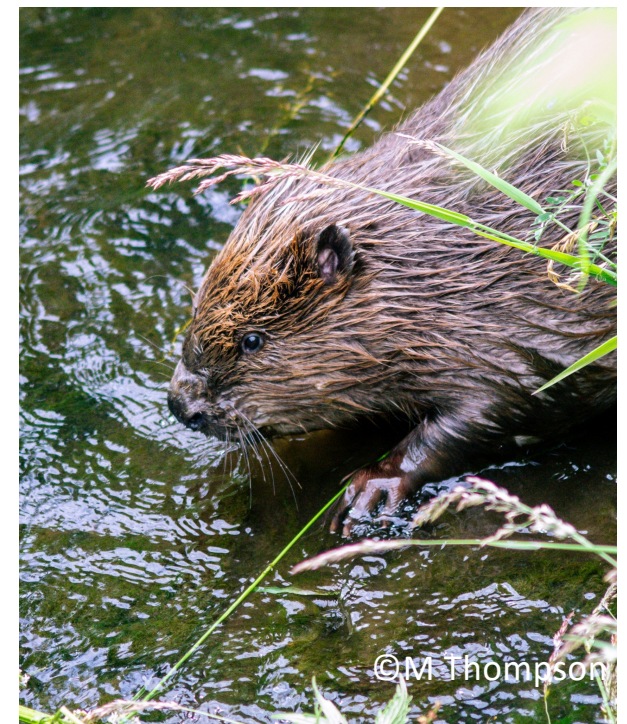
Now have a more complete national picture across wild and enclosure populations across Britain

Have good confidence in species identity and population origins

Good diversity, but management is key

Early warning of where genetic risks may emerge

Highlights need for reinforcement, not just establishment



# Informing Future Decisions



Beaver population growth and connectivity are key to securing long-term viability

## Licensing

- Wild release projects – need to consider minimum of **10-15 family groups**
- Less than this might be appropriate for reinforcement within or connected to catchments with existing populations

*beavers@naturalengland.org.uk*

## Founder individuals

Beaver Studbook: decision-making tool. ZIMS software

*studbook@beavertrust.org*

Natural England are investing in temporary holding facilities

Continued genetic monitoring – research opportunity?

Event Type	Date	Location	Local ID	Owner
Birth/hatch (Wild Birth/Hatch)	01/05/2023	United Kingdom / -		
Wild Capture	01/01/2025	Undetermined		
Transfer	01/01/2025	FIVE SIST	12345	
Transfer	01/02/2026	ENCLOSURE A	CAS	

Parent	%pct	Recorded By
SIRE WILD	100	Gemma Meechan

# Acknowledgements



Beaver Trust – Roisin Campbell, Rob Needham

Royal Society of Wildlife Trusts - Angelika von Heimendahl

Zoological Society of London

All those involved in sample collection

Natural England - Anita Hashmi, Will Askew, Maria Thompson

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