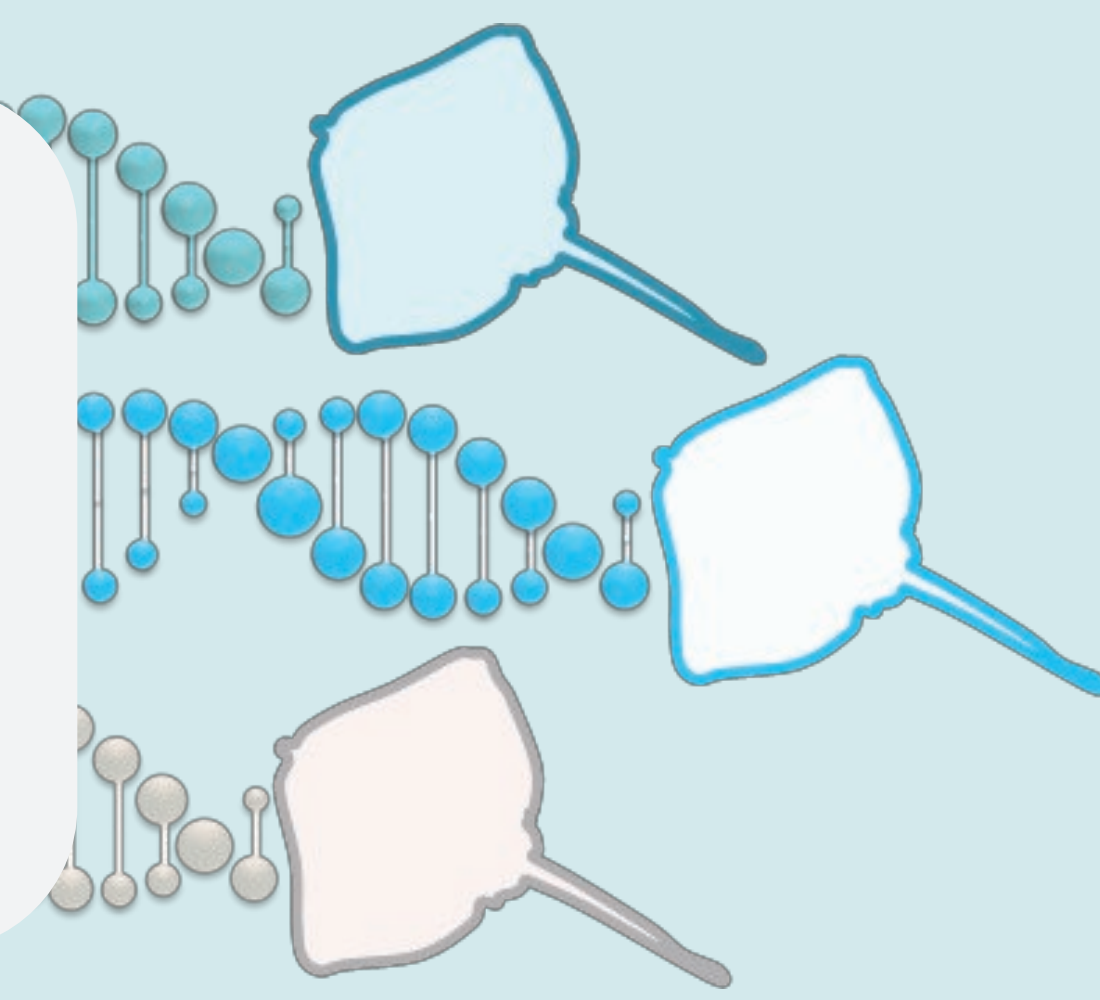




GenoPopTaille

Moving stock assessment into the future



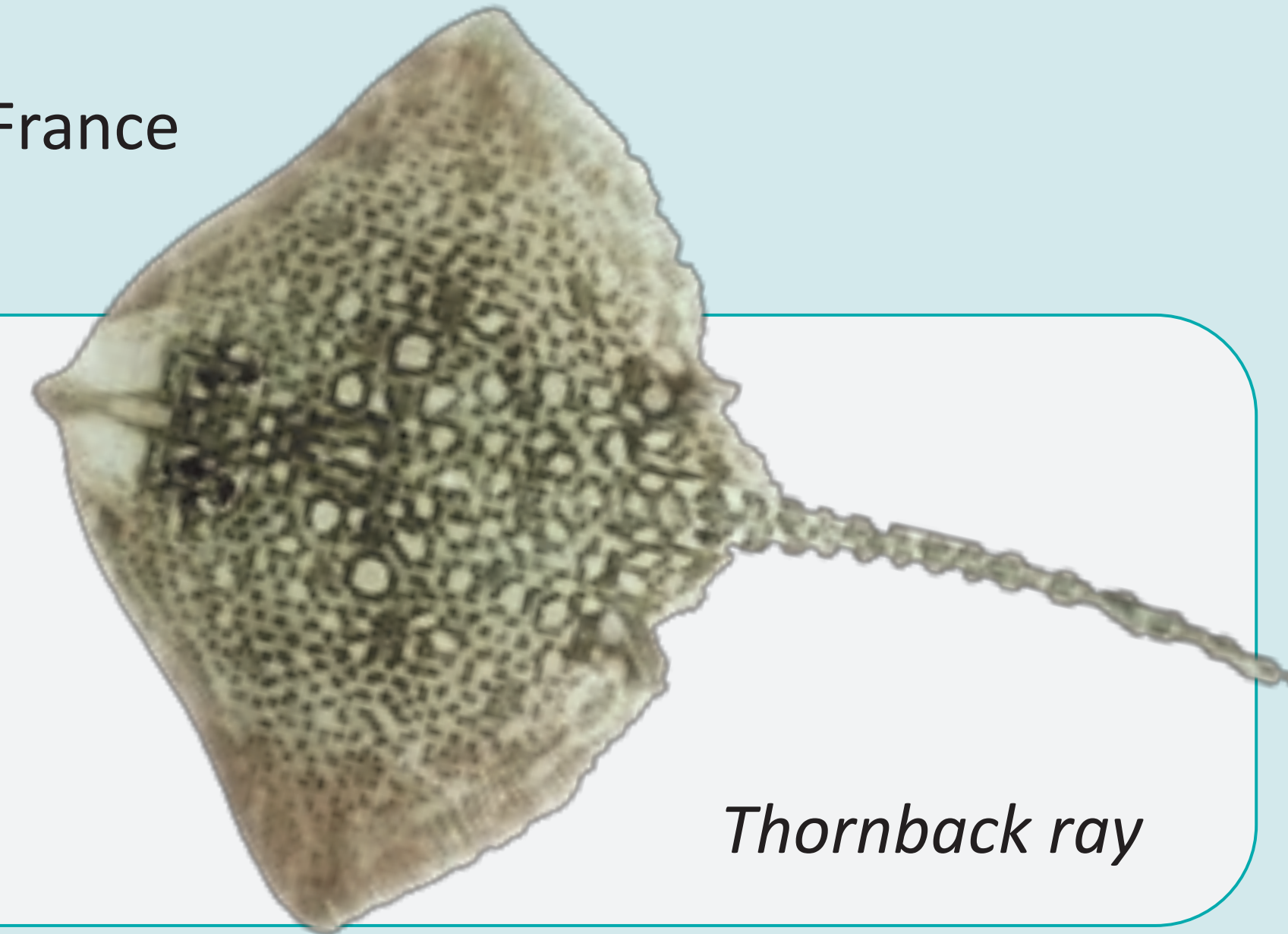
Florianne Marandel¹, Gérard Biais², Adeline Bidault⁴, Grégory Charrier⁴, Florence Cornette³, Sylvie Lapègue³, Jean Laroche⁴, Sabrina Le Cam⁴, Eric Stéphan⁵, Verena Trenkel¹, Pascal Lorance¹

¹ IFREMER EMH, Nantes, France ; ² IFREMER HGS, L'Houmeau, France ; ³ IFREMER SG2M-LGPMM, La Tremblade, France

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The project applies recent genetic methods to the thornback ray (*Raja clavata*) for :

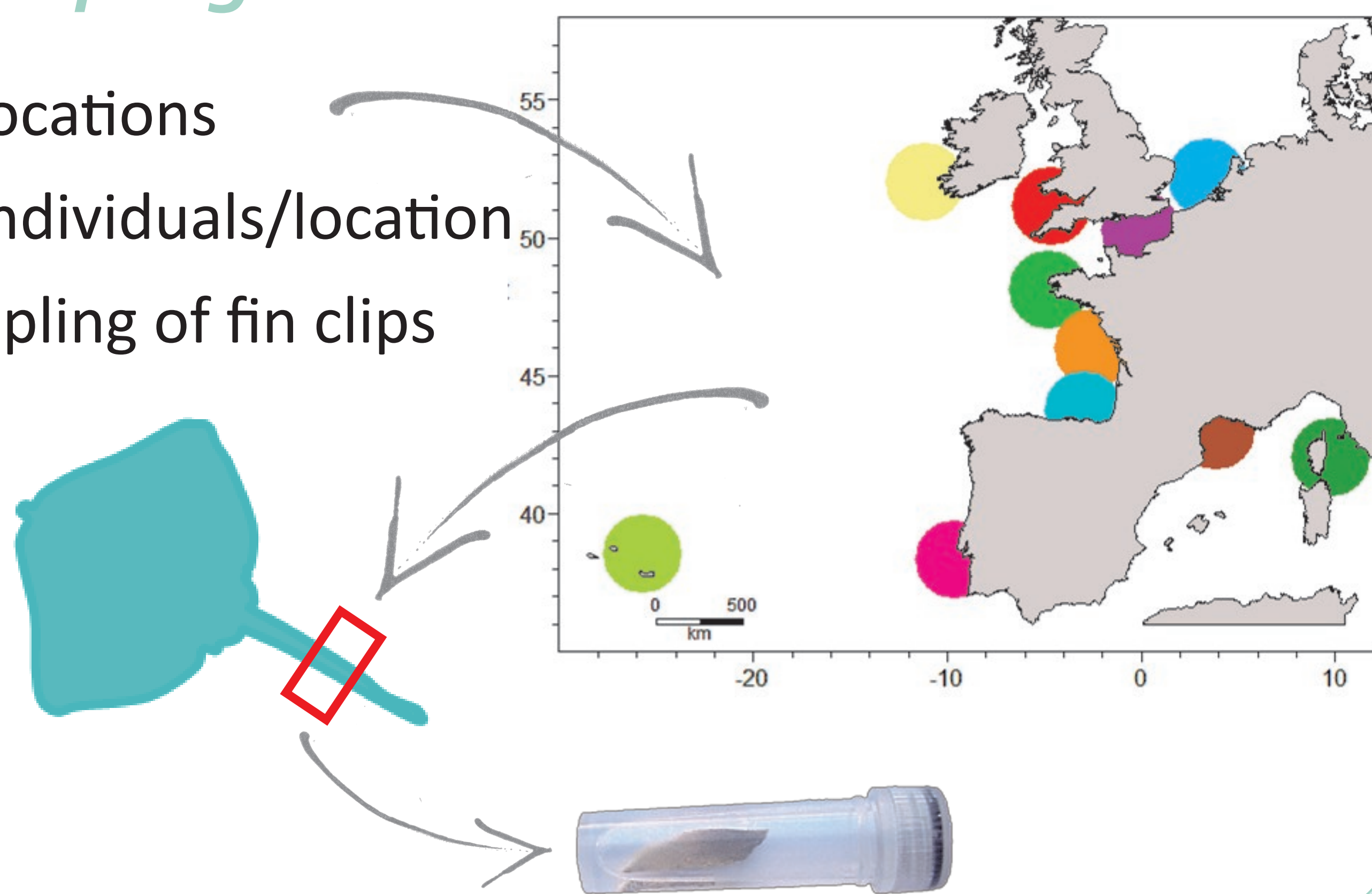
- Characterizing genetic diversity of the species
- Characterizing populations structure in the North-East Atlantic
- Estimating absolute population abundance and effective population size



Thornback ray

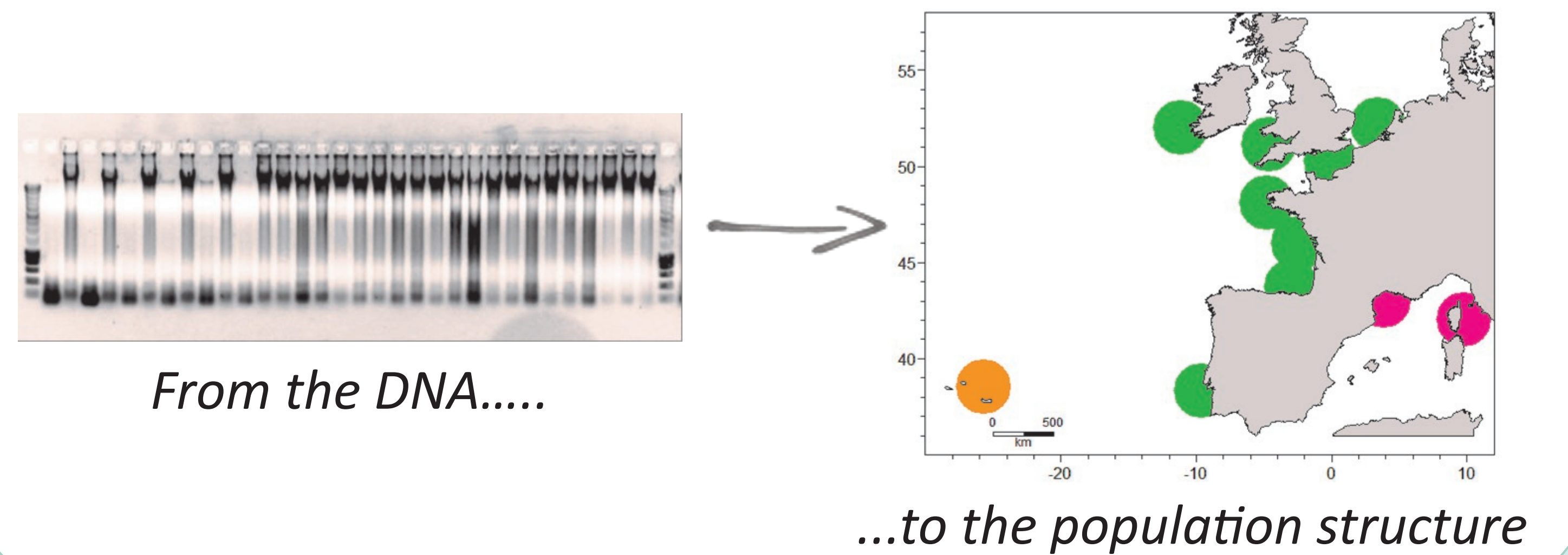
Sampling

- 11 locations
- 30 individuals/location
- Sampling of fin clips



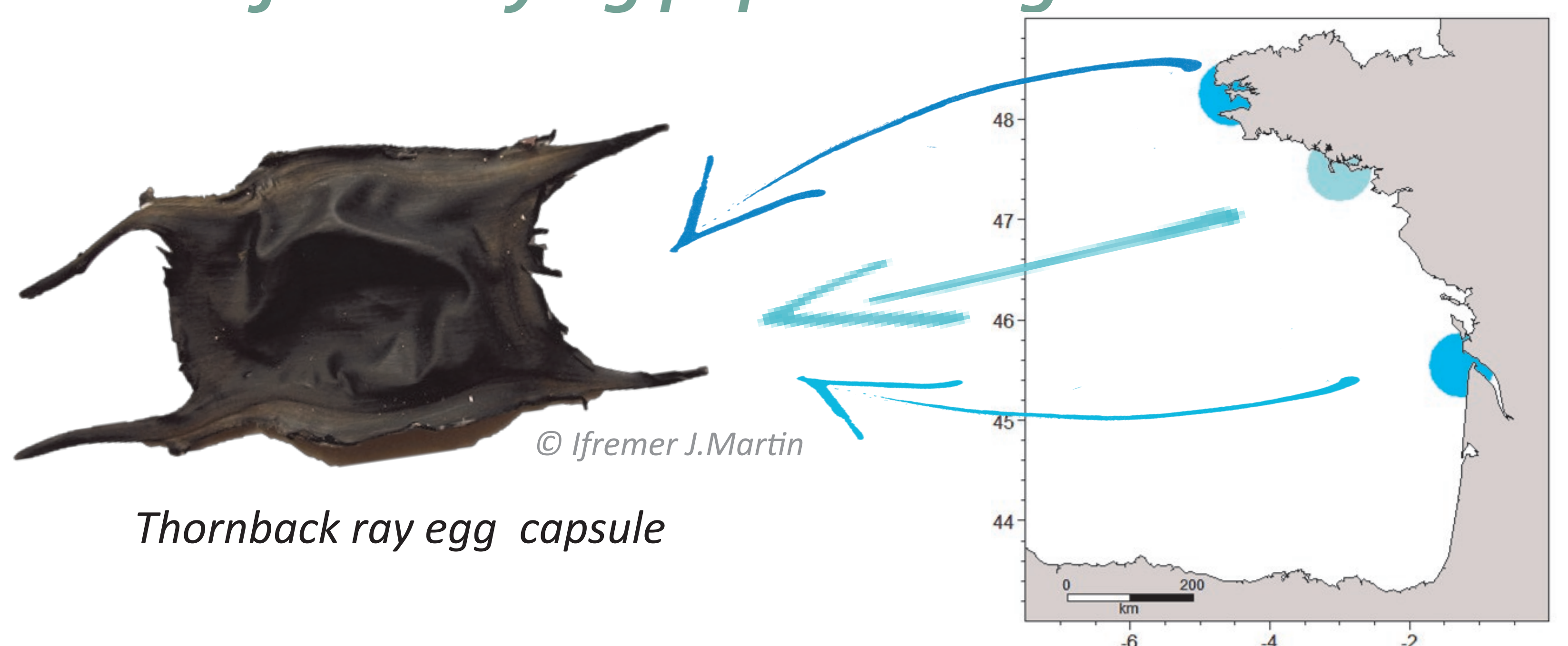
Genetic analyses

- *De novo* analyses : studying genetic diversity and population connectivity of the thornback ray
- definition of genetic markers (SNP)



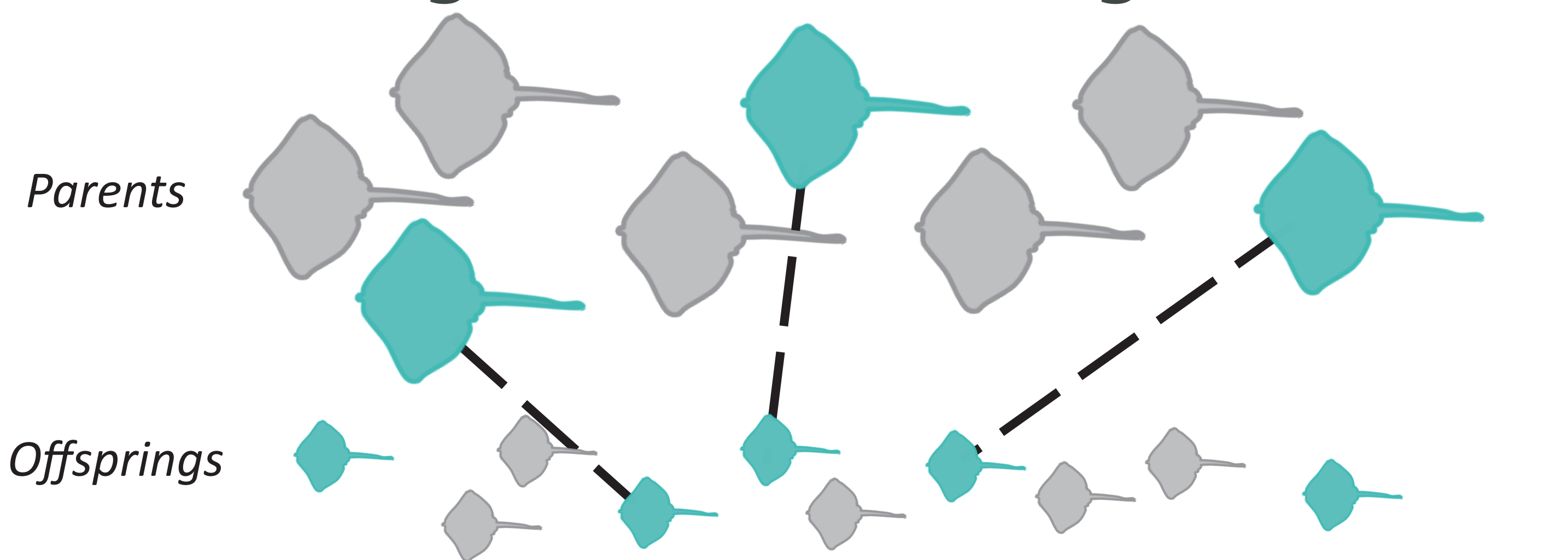
Investigation of the use of egg capsule DNA for studying population genetics

- Collection on 3 French sites
- DNA extraction
- DNA amplification
- Egg capsule DNA : maternal DNA or juvenile DNA ?



Thornback ray egg capsule

Evaluating abundance with genetics

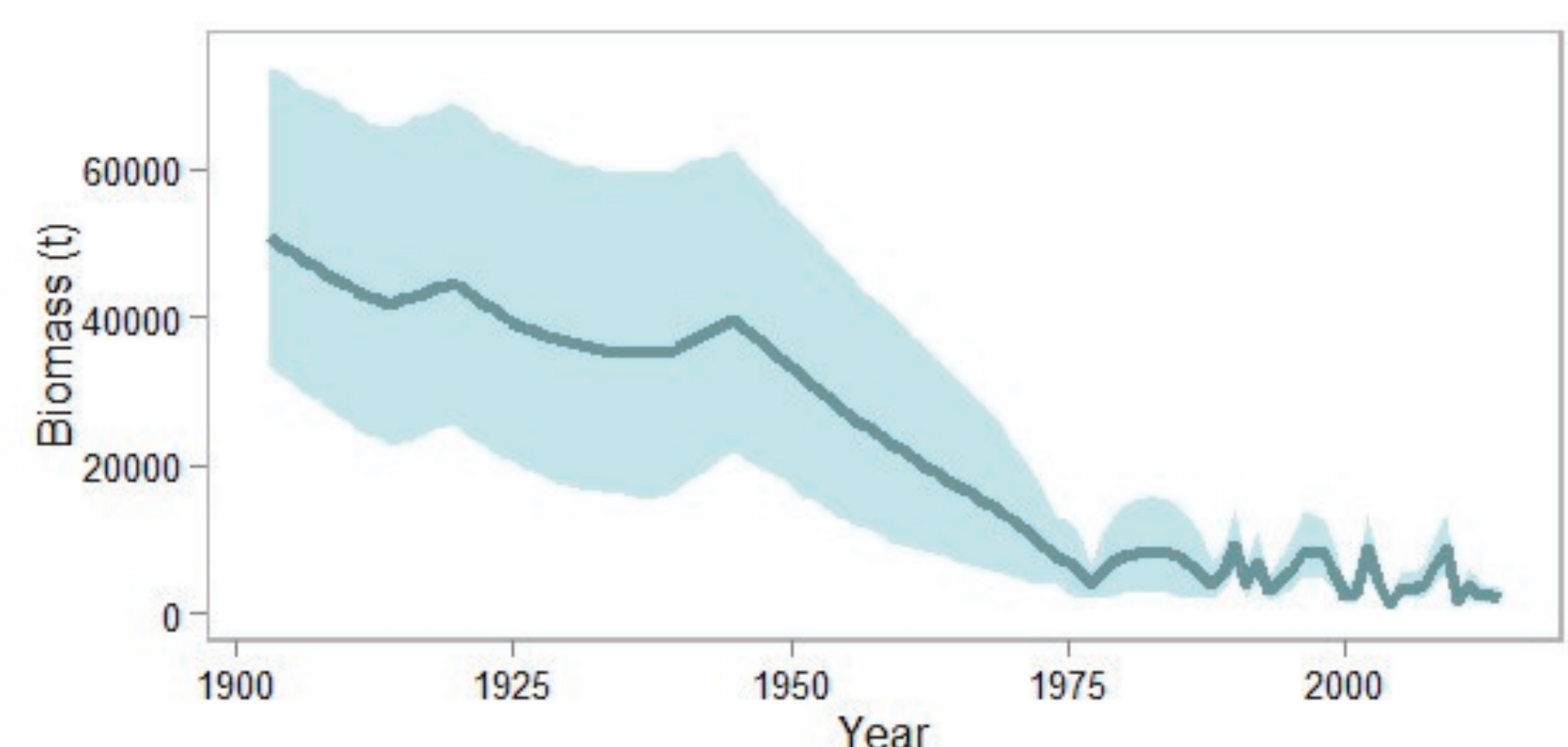


Estimation of the absolute spawning population size. Colored individuals are part of the sample and lines represent parental link.

- Estimation of the : - population census size
- effective population size

Comparison with non genetic methods

- Biomass production model
- Fisheries catch
- Bayesian inference
- Scientific survey data



Estimated biomass trajectories of thornback ray in the Bay of Biscay

Marandel et al. (Submitted)

Partners:



Funding:

