The feeding apparatus of first feeding European eel larvae: A mouth full of teeth
1. The feeding-problem

Video-recording

- Jaw angles
2. The size-problem

Video-recording
- Jaw angles

Reconstruction
- 3D coordinates
- Morphometric data
2. The size problem
Material & Methods
1. Modelling - input

Video-recordings

Gap distance: ± 100 µm

Results

![Graph showing gap distance for different structures: Teeth, Skull, Oesophagus. The Skull has the highest gap distance, followed by Teeth and then Oesophagus.]
Results

2. Modelling - input

Video-recordings

Rotation angle: $\pm 15^\circ$

Rotation angle

LARVI 2013
Results

3. Modelling – output (shift)

Reconstruction

Endogenous

Theoretical Forces

Force (µN)
Results

3. Modelling – output (shift)

Reconstruction

Intermediate

Theoretical Forces

Force (μN)
3. Modelling – output (shift)

Reconstruction

Exogenous

Theoretical Forces

Force (µN)
4. Modelling – output (lepto)

Reconstruction

Theoretical Forces

Force (µN)
Is the leptocephalus larva capable of biting?

- mm
- μm
- mm
- μm
- mm

- 100 - 700 μN
- > 5000 μN
Is the leptocephalus larva capable of biting?
Discussion

Is the leptocephalus larva capable of biting?
Is the leptocephalus larva capable of biting?

**FORCES**

- YES

**MORPHOLOGY**

- NO

**Alternatives:**

1. Piercing
2. Cage
3. Defense
Thank you for your attention!

Questions?

Evolutionary Morphology of Vertebrates

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