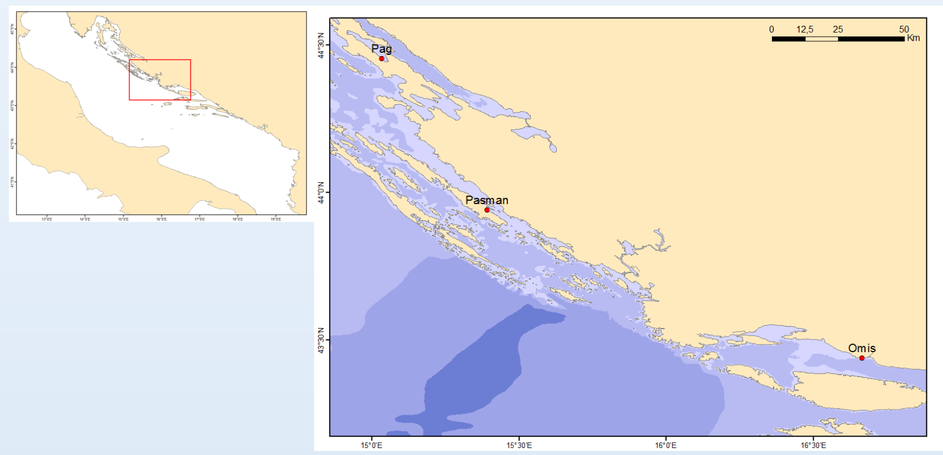
ARAMACC
Annually Resolved Archives of Marine Climate Change

INSTITUTE OF OCEANOGRAPHY AND FISHERIES SPLIT

Bivalve feeding ecology

Ariadna Purroy & Melita Peharda
Institute of Oceanography and Fisheries
Šetalište I. Meštrovića 63, 21000 Split - CROATIA



Abstract

Feeding ecology through δ13C and δ15N signatures of 3 bivalve species collected along the Croatian coastline showed a strong proximity to water column as main food source. Additionally, data from soft tissue (digestive gland) presented a robust spatial and temporal variation rather than interspecific.

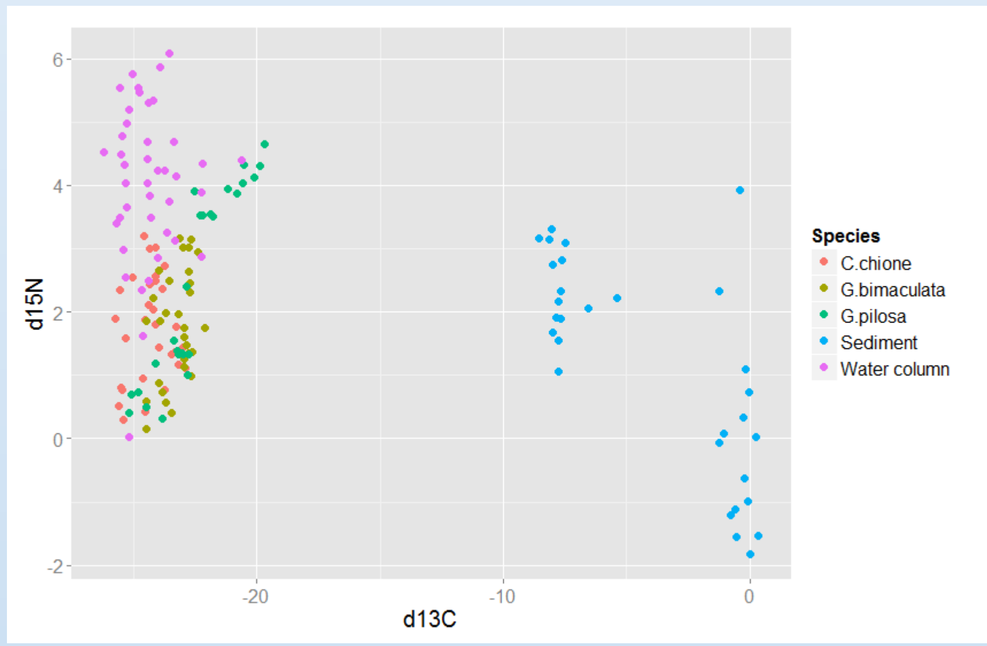


Figure 1. Stable isotope bi-plot in three marine ecological compartments (water column, digestive gland and sediment)

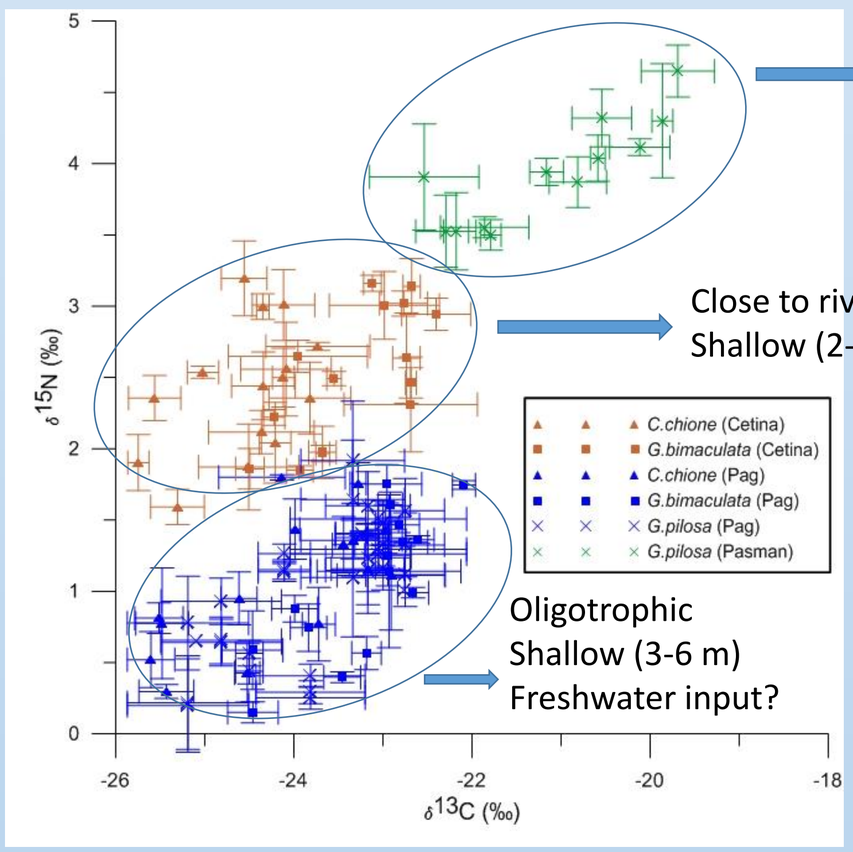


Figure 2. Spatial distribution of three bivalve species at three sites

Methodology

Dual isotopic (δ13C, δ15N) monthly measurements from digestive gland tissue, water column and sediment along a 18 month period. Three sites. Three species.

Results

A preliminary result after 15 month analysis showed an evident food source (**Fig.1**), spatial (**Fig.2**) and temporal (**Fig.3**) variability.
Warm season presented more enriched values than in colder months and same species seem to feed differently per site.

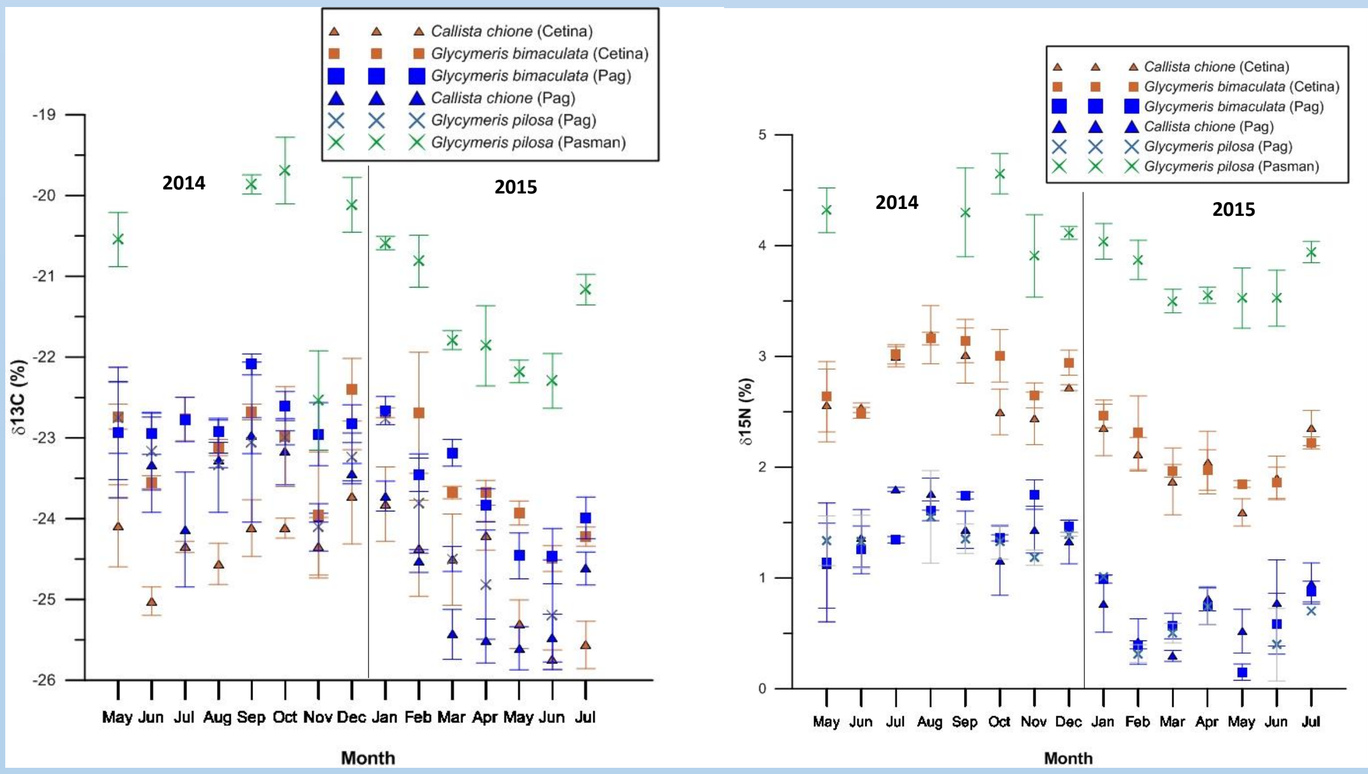


Figure 3. Temporal isotopic variability of three bivalve species along three sites

Open discussion

- Are more enriched δ15N values a result of anthropogenic influence? Food scarcity?
- Is temporal oscillation linked to food availability (ie. Chl *a* peaks)?
- Digestive gland as a good indicator for tracking trophic patterns due to high turnover rate
- ...