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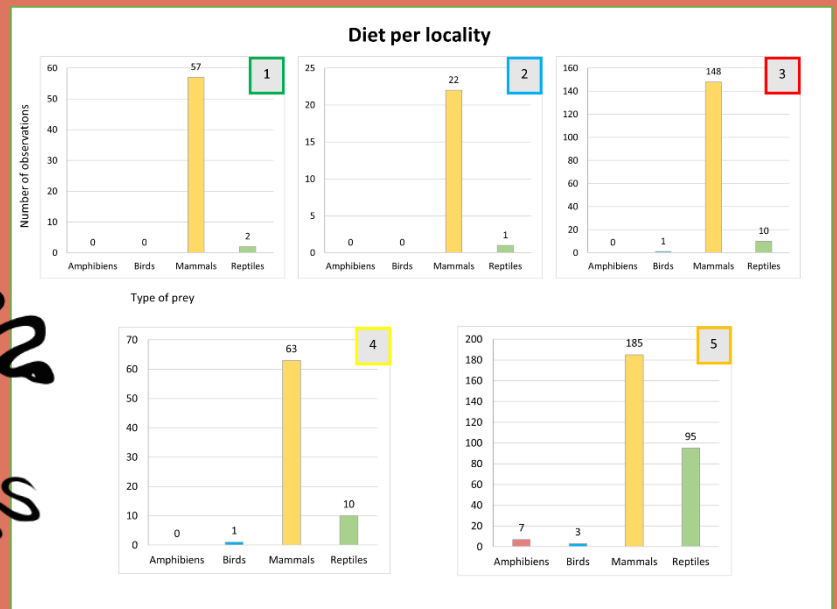
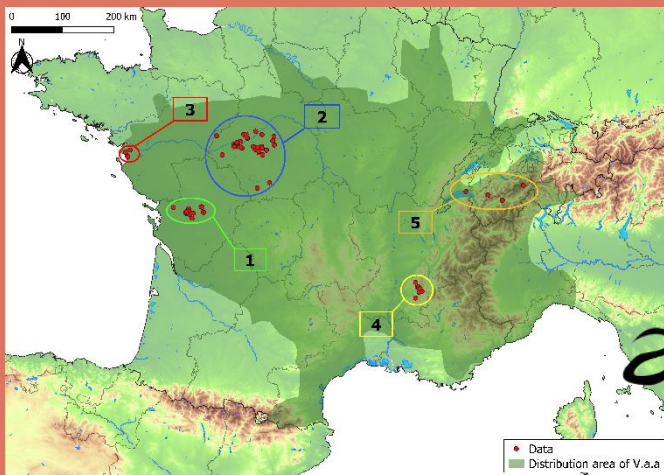


Diet variations across remote populations of a widely distributed snake species, the Asp viper (*Vipera aspis aspis*; Linnaeus 1758)

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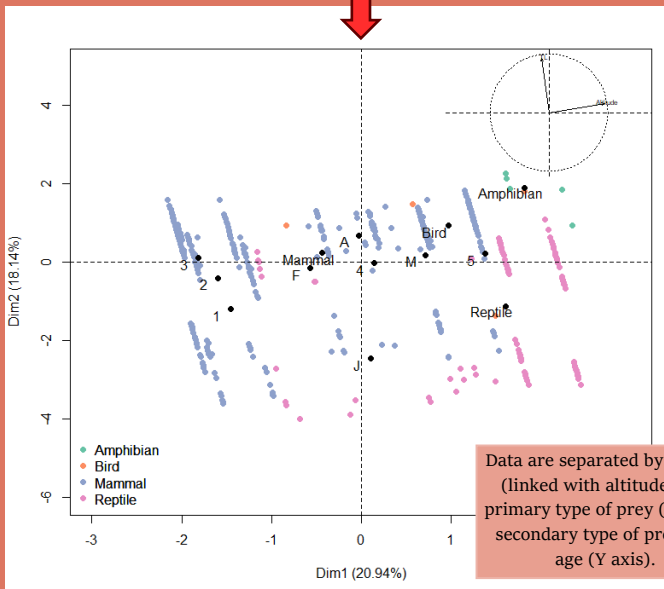
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Vipera aspis is a common species extending from west France to Switzerland, south Italy and north Spain. This snake inhabits a great variability of habitats, including plains nearby the Atlantic Ocean, Mediterranean habitats or mountainous alpine meadows. Diet may vary across habitats (e.g., plains, scrublands, mountains). Conversely, *Vipera aspis* may select a narrow spectrum of prey. We addressed this issue in the subspecies *Vipera aspis aspis*. Combining fieldwork and Museum specimens, we examined **1,680 vipers** and collected **605 prey' observations**. We compared five areas encompassing contrasted habitats (map below).



How to better explain collected data?

- ACP to combine environmental variables, individual characteristics and diet.



Data are separated by habitat (linked with altitude) and primary type of prey (X axis), secondary type of prey and age (Y axis).



Females consume more micro-mammals than males.



We also observed (and thus confirmed) the ontogenetic shift (juveniles consume more reptiles), less pronounced with altitude.

- In Atlantic plains (loc. 1/2/3) micromammals are overwhelmingly the main prey
- Mediterranean area presents a similar pattern (loc. 4)
- Lizards represent an important part of the diet in alpine meadows (loc. 5)

Perspectives:

- ❖ Does diet reflect prey abundance and/or strong prey selection?
- ❖ Necessity to explore more habitats, thus more population and/or subspecies

Graph of qualitative and quantitative variables of total data, colouring by the type of prey; sex and stage represented by letters (F and M / A and J), groups by corresponding numbers. Variables explain by dimensions: 1st dimension = "Group" and "Type of prey" / 2nd dimension = "Stage" and "Type of prey".

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