What Are They Really Eating? Stomach versus Intestine as Sources of Diet Information in Lacertids

Carretero, M. A. & G. A. Llorente Dep. de Biologia Animal (Vertebrats). Fac. de Biologia. Univ. de Barcelona.

Av. Diagonal, 645, E-08028 Barcelona. Spain.

In many studies on lizard diet the content of the complete digestive tract is analysed as a whole assuming that the differences between stomach and intestine portions are irrelevant. Nevertheless, it has conversely been pointed out that stomach would represent more accurately and more uniformly than intestine the real diet. Digestion increases and identification opportunities decrease when preys progress throughout the digestive tract and this process probably would not be uniform but dependent on the type and size of the prey. These ideas were tested using a coastal population of the lacertid Psammodromus hispanicus as model. The digestive tracts of 215 lizards from NE Spain collected in monthly campaigns during the years 1986 and 1987 were analysed separately in stomach and intestine portions. The number of items, the taxons and the prey sizes were considered and Jover's method (Jover, 1989) was used for statistical analysis.

Results show significant differences between stomach and intestine contents. Some types of preys, especially Coleoptera, were misrepresented in the intestine. Despite the overall correlation found between diversities of both portions without any individual difference, the populational diversity of the stomach was significantly higher than the intestine one. Moreover, smallest and largest preys were underestimated when analysing the intestine.

In conclusion, the diet composition of the intestine can be considered as biased when compared with stomach one producing an increment of the "background noise" if both mixed. So, results from intestine analysis should be interpreted with caution and it is recommended not mixing together both sources of information in order to describe properly the diet of the lizards.