

durante la predazione. Gli effetti della digestione possono essere anche molto intensi (distruzione dell'osso pressoché completa), ma sono generalmente modesti e talora nulli. Sono pertanto rilevabili tutti i caratteri diagnostici utili ai fini dell'identificazione specifica. Il grado di conservazione dei resti qui descritti suggerisce una moderata aggressività dei processi digestivi dell'allocco e quindi (anche in considerazione del fatto che gli anfibi possono costituire fino al 40 % delle sue prede -Andrews, 1990) un suo ruolo come potenziale agente di accumulo per i resti degli anuri nei depositi paleontologici. Si auspica che ulteriori analisi possano caratterizzare in modo univoco le alterazioni dovute all'attività digestiva degli strigiformi in modo da poter quantificare l'abbondanza dei resti fossili degli anuri derivati dagli accumuli di borre.

POSTER

Distribution of amphibians in relation to landscape topography in Lecco Province (north-western Italy)

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Recent acquisitions on geographical information system (GIS) allow a more effective application of GIS in the analysis on animal distribution in relation to spatial environmental attributes (Moore et al., 2004). In particular, environmental descriptors as altitude, exposure and land covers represent useful implements to explain the distribution and abundance patterns of amphibians. Considering the high breeding site fidelity and the relative short dispersal distance of amphibians (till 3000 m recorded for *B. bufo*, Sinsch, 1990), a GIS-based approach has been used to assess environmental characteristics influencing aquatic and surrounding habitats of amphibians in Lecco Province.

Census of amphibians was carried out since the second half of 1990 and it is still ongoing within the borders of Lecco province (816 Km²). We have detected eleven species of amphibians, three urodeles and eight anurans: *Salamandra salamandra*, *Triturus vulgaris*, *Triturus carnifex*, *B. variegata*, *Bufo bufo*, *Bufo viridis*, *Hyla intermedia*, *Rana latastei*, *Rana dalmatina*, *Rana temporaria* and *Rana kl. esculenta*. For each animal a set of data was recorded: sex, ecological and environmental parameters and the geographic position. Records of *S. salamandra*, *R. temporaria*, *R. dalmatina* and *R. latastei* have been extracted from our database and the geographic coordinates were plotted on a digitized C.T.R. (1:10000 Giunta Regionale della Lombardia - Servizio Sistema Informativo Regionale), using the software ArcView 3.2 (ESRI). Amphibian positions were allocated to different attributes by use of digitized maps, concerning topography, soil use, hydrography, collected from both public and private institutions, and all the available information has been organized in a GIS. A relational database was obtained including the geographic position of amphibians, altitude, habitat type, distance from aquatic sites, from roads, from human infrastructures and other environmental attributes. Then, statistical analysis was performed by SPSS 11.5.

S. salamandra was observed in 131 sites included in 46/90 municipalities of Lecco province (51.1%), at an altitudinal range of 230-1030 m s.l.m., in the following aquatic habitats: torrents, ponds, drinking troughs, fountains and water reservoirs. *R. temporaria* was found in 54 sites situated in 24/90 municipalities (26.7%), from 220 to 1750 m s.l.m., in torrents, temporary and permanent ponds. *R. dalmatina* was recorded in 43 sites situated in 24/90 municipalities (26.7%) from 220 to 600 m s.l.m., in temporary or permanent ponds, conduit and cement reservoirs. *R. latastei* was found in 24 sites of 9/90 municipalities (10%), from 220 to 330 m s.l.m., in conduit, ponds, irrigation ditch, torrents, water reservoirs.

Descriptive maps concerning distribution of *S. salamandra* and the three species of *Rana* in Lecco Province were performed by GIS. Present study gives a contribution to the knowledge on the distribution of the herpetofauna in Lombardy, and we wish it could be an effective help and advice for public administrations in matter of management of amphibians and their habitats in the territory of Lecco province.

POSTER

Anfibi e Rettili nei pSic di Monte Ceresa e Montefalcone Appennino – Smerillo della Provincia di Ascoli Piceno.

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