The predictability and patterns of vigilant behaviour

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ABSTRACT

While foraging, many animals alternate between feeding and scanning. Spectral analysis of continuous series of scan durations S and inter-scan intervals I for American Goldfinches *Carduelis tristis*, feeding either on small or large seeds, and choughs *Pyrrhocorax pyrrhocorax* showed that there were nonrandom fluctuations in the magnitude of S and I is all the examined series. Both the I and S showed cyclical oscillations between short and long events. Within individuals the sequential and temporal patterns in the I and S series were similar. However, the temporal patterns were more affected by variations in food-handling time than were the sequential ones. The predictability of the I and S series and the similarity, within individuals, of their sequential and temporal patterns seem general processes resistant to variations in behavioural constraints, and the temporal patterns in the I and S series fit to the method of handling food.