



Overlaps among phenological phases in flood plain forest ecosystem

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There is a growing concern that climate change has significant impacts on species phenology, seasonal population dynamics, and thus interaction (a)synchrony between species. Species that have historically undergone life history events on the same seasonal calendar may lose synchrony and therefore lose the ability to interact as they have in the past. In view of the match/mismatch hypothesis, the different extents or directions of the phenological shifts among interacting species may have significant implications for community structure and dynamics. That's why our principal goal of the study is to determine the phenological responses within the ecosystem of flood plain forest and analyzed the phenological overlapping among each phenological periods of given species.

The phenological observations were done at flood-plain forest experimental site during the period 1961-2012. The whole ecosystem in this study create 17 species (15 plants and 2 bird species) and each species is composed of 2 phenological phases. Phenological periods of all species of ecosystem overlap each other and 43 of these overlapping were chosen and the length, trend and correlation with temperature were elaborated.

The analysis of phenophases overlapping of chosen species showed that the length of overlay is getting significantly shorter in 1 case. On the other hand the situation when the length of overlaps is getting significantly longer arose in 4 cases. Remaining overlaps (38) of all phenological periods among various species is getting shorter or longer but with no significance or have not changed anyhow.

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