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DELSINNE, THIBAUT, ROISIN, YVES and LEPONCE, MAURICE\*, IRSNB, Biological Conservation Section, 29 rue Vautier, Thibaut.Delsinne@sciencesnaturelles.be, *Temporal foraging overlaps in a Chacoan dry forest ant assemblage*.

Food resource partitioning among species belonging to the same ant assemblage facilitates species coexistence. For the first time, we measured temporal foraging overlap patterns in an arid habitat and we compared them with those generated by a null model analysis. In this kind of environment, ant species should display a foraging overlap greater than expected by chance due to thermal constraints. We studied bait occupancy patterns exhibited by a ground ant assemblage in a dry subtropical forest of the Paraguayan Chaco. Baits (honey or tuna) were distributed at intervals of 1m inside a 12x12m grid. Species encountered at baits were noted, along with temperature, every 15min over 90min sessions conducted in the morning and in the afternoon. Our results were confronted with data generated by 1000 null model randomizations. 24 species were attracted to the baits. Null model analysis revealed a temporal niche partitioning different from chance for both tuna and honey afternoon baiting sessions but not for morning ones. Moreover, a null analysis highlighted a temporal foraging pattern dependent on temperature conditions. When the temperature was below 35°C, interspecific competition appeared to be the main deterministic process. By contrast, temperature over 35°C appeared to constrain the colonization dynamics. High and low temperature specialists were observed. Ground ants (*Pheidole*, *Brachymyrmex*, *Wasmannia*) did not exhibit a preference in resource quality. By contrast, semi-arboreal ants (*Crematogaster*, *Camponotus*, *Pseudomyrmex*) displayed a preference for protein food. However, differences of food preferences did not appear to structure the foraging pattern at the assemblage scale. Overall, our results are consistent with our prediction. In the Chaco, temperature (rather than competition) appears as the main structuring factor affecting the temporal foraging activity at the assemblage scale.