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Building a Phylogenetic tree for Diplolepis rosae

Rose gall wasps Diplolepis rosae can induce roses (Rosa canina and other species) to create homes for their young called galls by injecting their eggs into stems adjacent to axillary buds. These galls face predation from parasitoids such as Torymous bedeguaris and Orthopelma brevicorne and also by birds. Using the mitochondrial gene cytochrome c oxidase subunit I we identified local samples of wasps and parasitoids to species and used data sequences from other research studies as well as local samples to build a rough phylogenetic tree. The results have shown that local samples of Diplolepis rosae are most closely related to two different Europeans clades. The local parasitoids were most closely related to a Canadian clade although an exact determination of origin cannot be made for these species because of lack of European sequences uploaded to Genbank.