

COMPARATIVE INVESTIGATIONS ON THE TROPHIC RELATIONSHIP OF  
FORMICA POLYCTENA FORST. AND FORMICA PRATENSIS RETZ. WITH  
VARIOUS LACHNID SPECIES FROM SEVERAL WOOD BIOTOPES IN THE  
REGION OF WURZBURG(BRD) AND SINAIA, TG OCNA, SINGEORZ BAI  
(RUMANIA)

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SUMMARY

A comparison between the trophic activities of the species Formica polyctena and Formica pratensis with Lachnid species has revealed a number of similarities and differences. These investigations were carried out in woodland biotopes (Bildeiche, Lohlein and Katzensteig in the Kitzinger Klosterforst near Wurzburg and Sinaia, Tg. Ocna, and Singeorz Bai in Rumania).

The differences are characteristic for the species and relate to zoogeographical distribution, range within the wood, the construction and population of the nest, and resistance to climate. These characteristics also extend to some differences in trophic relationships with the Lachnids.

The range of the species F. polyctena is almost twice as large as that of F. pratensis, as is the width of the nest runways, the stand of pines exploited and the visits to Lachnid colonies (Cinara pinea). Thus the number of pines attacked and the number of Lachnid colonies present are higher than in the biotope populated by F. pratensis. The density of predatory insects (Coccinellidae and Pentatomidae) is higher on pines near to F. pratensis nests than on those around F. polyctena nests.

Extension of the period of trophobiosis (by about a month) is greater in F. polyctena than in F. pratensis. This difference rests upon the greater resistance of F. polyctena to low temperatures and to high relative humidities.

The applied significance of F. polyctena and the geographical distribution of F. pratensis will also be discussed.