Cixidia pilatoi (Fulgoromorpha, Achilidae) in France: first occurence and preliminary ecological observations in Massif des Maures (Var)

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Cixidia (Epiptera) pilatoi D'Urso & Guglielmino, 1995 has been described from Italy. Since then it has been recorded in several countries in Europe, mainly in Central Europe.

Colonies of adults and nymphs were observed for the first time in France in natural habitats in 2013 during a survey for a scientific popularization program (Guide des Hémiptères editorial project, in French -in press-). It seems to be common in the Massif des Maures (Var Department, South East of France), in oak forests dominated by *Quercus suber* and *Quercus pubescens*, in mixed habitat with *Pinus* spp. and diverse understorey shrub trees. We found *Cixidia pilatoi* nymphs in small to large colonies during spring (March to May) in decaying wood colonized by fungus, under bark or close to litter, when the litter is also colonised by fungus in moist habitat. Relationships with ants also seems to occur and especially with carpenter ants (*Camponotus* sp.) and other species like *Lasius* sp. occuring in logs and branches where *Cixidia* is found. In laboratory conditions, the larvae collected with bark grow until the imaginal metamorphosis under high humidity conditions (75-95%), that allow fungi to maintain and continue their development. In natura and in the laboratory, it is difficult to demonstrate a direct trophic relationship between nymph and fungi. Nymphs are very sensitive to disturbance of the observer and they change their behavior.

This species is widespread in the Massif des Maures and in the south of France in general and could therefore become a model for understanding the trophic ecology of Achilidae. We plan to study the trophic ecology in cooperation with specialists of the fungal flora, to establish relationship between fungal biodiversity, ecological conditions and Achilidae biodiversity. We discuss whether this species, described from Italy is a cryptic species or a species that increases its range northward because of climate change and anthropogenic effects.