Located at the heart of one of the most floristically diverse regions of Mexico, the town of Santa María Ixcatlán is home to the last ten speakers of the Ixcatec language. This indigenous language belongs to the Popolocan branch of the vast Otomanguean stock. Over the past few years, an interdisciplinary, international team comprised of linguists and botanists have come together to document the language before it ceases to be spoken. An important focus of the team is the documentation of the ecological knowledge embedded in the language, hence the interdisciplinary approach. Two aspects of the Ixcatec documentation project will be discussed during this presentation. First that the broadened, interdisciplinary horizons of language documentation present significant methodological challenges. Second, that the relationship between language and ecological knowledge in the context of critical language endangerment is complex and its analysis reveals important aspects of the process through which a community may or may not be able to retain ecological knowledge.