Study of the Achupalla Worm (From the Schistotheca Family) in the Biodegradation of Low Density Polyethylene (LDPE)

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Through direct observation and experimentation, this investigation studies the Achupalla worm of the Schistotheca family (it has not been registered scientifically). It feeds on the Achupalla plant as well as on low density polyethylene (LDPE). Our aim is to shed light on this study of the Achupalla butterfly worm as a source of "natural biodegradation" of low density polyethylene (LDPE). We think that this is a wonderful discovery of our educational institution in Cusco and, consequently, of Peru, as this species is a potential solution to the serious problem of pollution that our planet is currently suffering from due to plastic. The ecological impact of this tiny worm, according to our studies, experiments and analyzes, exceeds the chemical methods that are currently used to degrade plastic. In addition, it is more effective than the Galleria Mellonella worm (wax moth), discovered in Europe by the researcher of the Superior Council of Scientific Research (CSIC) Federica Bertocchini, because the achupalla worm biodegrades polyethylene more quickly through its metabolic process. The Achupalla worm develops in a climatic range of 4ºc to 20ºc degrees. In order to manage the variables, we placed the worm in low density polyethylene (LDPE) in conditions with different temperatures, which will allow us to understand the behavior of the Achupalla worm and at what temperature it ingests LDPE more quickly.

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