From Cells to Ecosystems: The pervasive web of evolutionary change

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Evolution is a biological theory that states that all living things on Earth are descended from other preexisting organisms and that differences between them are due to modifications over successive generations. This process involves alterations in the genetic makeup of a population over time, potentially leading to the emergence of new species, characteristics, and genetic modifications. Our project examines a spectrum of topics related to this evolutionary framework, showcasing its broad applicative reach across different biological systems and scales. These topics include the influence of habitat on antler phenotype changes, the use of rodent models to simulate human biological processes, the community assembly mechanisms in fungal communities, and the evolution of skeletal structures in teleost fish, specifically the transition from cellular to acellular bone structures. Additionally, our exploration goes into the evolutionary web, connecting different biological disciplines from cells to ecosystems, with another poster providing insights on ecosystem, community, population, and organismal scales.