

Biodiversity of insular biota: Patterns and processes in space and time

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A common pattern on islands is species impoverishment which is the most obvious component of the so-called insular syndrome. However, species impoverishment does not necessarily mean that biodiversity is lower than on nearby mainland because species are not the sole currency of biodiversity. Scanning several components of biodiversity across scales of time and space in the Mediterranean archipelago reveals that a long-lasting evolution in islands which have been isolated from mainland for a very long time led to odd assemblages of unique animals. For example if non flying mammals were not quite diverse on Mediterranean islands before they were invaded by humans, they included endemic species that evolved striking adaptations to insular environments. For example no less than twelve species of dwarf elephants evolved in many islands of the Mediterranean, providing a striking example of convergent evolution. At much smaller scales of space and time, local adaptation might produce high levels of biodiversity at the level of populations. In highly mobile organisms such as birds, the homogenizing effects of gene flow are supposed to prevent adaptive differentiation at spatial scales that are smaller than the dispersal range of individuals. However, island-specific traits such as low dispersal, sedentariness, high site fidelity, strong philopatry and assortative mating have often been reported in insular birds. These traits may be conducive to local population differentiation at much smaller spatial scales than on mainland regions whenever divergent selection pressures are strong enough to counteract the homogenizing effects of gene flow. Comparing the phenotypic and genetic variation of a series of populations of blue tit *Cyanistes caeruleus* in two similar landscapes, one on the mainland in southern France and the other on the island of Corsica I will show how and why genetic and phenotypic variation is much higher on the island than on the mainland

Mapping patterns of β -diversity for beetles across the western Amazon Basin : A preliminary case for improving conservation strategies

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In 1994, I joined a team responsible for monitoring the impact of an Oil Company building and using roads to access their platforms and refining stations at the edge of Yasuni National Park in eastern Ecuador. We used my canopy fogging techniques to acquire samples and we now have about 9 million specimens from the lowland rainforest canopy in 2 plots, each 1 ha in size. I will report on the inventories, logistics, and impact on the local Haurani indigenos. Then move on to the taxonomic impediments in dealing with such an enormous undertaking.

La valoración de la biodiversidad desde una perspectiva económica: Retos y resultados

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La pérdida de biodiversidad es uno de los principales problemas ambientales a los que se enfrenta hoy en día la humanidad. El análisis económico ayuda a entender cuáles son las causas fundamentales de la pérdida de biodiversidad y la racionalidad económica que subyace a las mismas. De esta forma, permite identificar los sectores y las actividades sobre los que habría que actuar para detener esta pérdida. Sin embargo, no es tan sencillo dar respuesta a la otra cara de la moneda: no resulta fácil valorar en términos económicos cuáles serían los beneficios de frenar esta pérdida de biodiversidad, aún cuando existe una conciencia clara de su importancia. Los principales métodos utilizados en la literatura económica para obtener un valor monetario de la biodiversidad no miden realmente el valor de la biodiversidad como tal, sino de variables relacionadas con ella. Por ello vale la pena comenzar con una aproximación más modesta, analizar el problema desde el punto de vista del coste de oportunidad de conservar la biodiversidad y evaluar, por ejemplo, y bajo este prisma, propuestas como la "Iniciativa Yasuní".