

## Signaling in islands: The case of Lilford's wall lizard from Dragonera

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### **Abstract:**

Studies of the effects on insularity on the design of animal signals are scarce, particularly in lizards. Here we use Lilford's wall lizard from Dragonera (*Podarcis lilfordi gigliolii*) to ask how insularity has affected its repertoire of social signals relative to mainland *Podarcis*. We focused on two visual signals shared by many *Podarcis*: UVblue patches (UBP) and visual displays. The latter include foot shakes and the raised body displays used to expose the UBP. We examined if the number or spectral characteristics of the UBP are associated with morphological traits related to individual quality. We also used visual models to measure sexual dichromatism in the UBP. We did not observe foot shakes or any other visual displays. The UBP did not covary with body condition or fighting ability in males, suggesting that this coloration does not signal individual quality. We also found very little sexual dichromatism, females having malelike UBP. We hypothesize that this pattern of reduced social signaling is due to the high population density of *P. lilfordi gigliolii*, which discourages territorial behavior and promotes extreme social tolerance, making most social signals unnecessary.