

Differential habitat selection by *Pipistrellus pipistrellus* and *Pipistrellus pygmaeus* identifies distinct conservation needs for cryptic species of echolocating bats

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Cryptic species are similar in morphology, and make interesting subjects for relating morphological differentiation to ecological resource partitioning. Can species that are morphologically almost identical occupy different ecological niches, and hence potentially need distinct conservation planning? The discovery that the most widespread bat in Europe – the pipistrelle – comprised two cryptic species (*Pipistrellus pipistrellus* and *Pipistrellus pygmaeus*) that emit echolocation calls at different frequencies provides a remarkable model system for investigating links between morphology, echolocation call design and resource partitioning. We investigated resource partitioning between the two cryptic species of sympatric pipistrelle bats by radio tracking breeding females. Habitat selection was investigated by using compositional analysis. *P. pygmaeus* selected riparian habitats over all other habitat types in its core foraging areas, whereas *P. pipistrellus*, although preferring deciduous woodland overall, was more of a generalist, spreading its foraging time in a wider range of habitats. Although morphologically very similar, the cryptic species show quite different patterns of habitat use. Our findings suggest that large-scale differences in habitat preferences can occur between sympatric bat species that are virtually identical in flight morphology; hence morphological differences may be a weak indication of ecological differences between taxa. Conservation planning needs to take account of these differences to meet policy and legal obligations associated with these protected cryptic species.