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Auditory-object recognition in echolocation

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Over the last decade, auditory research has focussed on mechanisms involved in the segregation and grouping of auditory objects, and the influence of perceptual features on the formation of auditory entities. Visual research tells us, however, that object formation is only the first step in object recognition; complex, multi-dimensional manipulations are required to compare a perceived object with internal representations of known objects. For an echolocating animal, auditory objects often correspond to real, 3-dimensional objects. These objects have to be recognised independent of their size, and `viewing' angle. Mechanisms underlying this auditory-object constancy are unknown. A series of psychophysical experiments will be presented addressing the bats' ability to recognise 3D objects in previously unknown sizes and `viewing' angles