

# Package **wild1**: R tools for wildlife research and management

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## Description

Package **wild1** is a compilation of classes, functions, and demonstrations intended to facilitate analyses commonly performed by wildlife researchers and managers. Enhancements are added at regular intervals as I generalize functions written for my own use.

This release provides support for 2 types of tasks:

1. Estimation of cause-specific mortality

Function **csm** is a flexible implementation of the nonparametric cumulative incidence function estimator presented by Heisey and Patterson (2006), with checks for foreseeable errors. The package also introduces a new class ("**csm**") for objects produced by **csm** and provides an associated plotting method. For a detailed demonstration, see "csm.pdf," a vignette included with the package documentation.

2. Home range estimation

Function **hr.mcp** is a minimum-convex-polygon home-range estimator that features robust trimming of outliers, domain restriction, clipping of home ranges to study area boundaries, and exclusion of "holes" (e.g., inaccessible or unsuitable regions within study areas). The package also introduces a new class ("**hr.mcp**") for objects produced by **hr.mcp** and provides an associated plotting method. For a detailed demonstration see "mcp.pdf," a vignette included with the package documentation.

## Required notices

Package wild1 is a USGS open-source computer program. Version 1.07 was built with R 2.11.0 on 2010-11-22, for compatible versions of the Windows operating system.

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## References

Heisey, D. M., and B. R. Patterson. 2006. A review of methods to estimate cause-specific mortality in presence of competing risks. *Journal of Wildlife Management* 70(6):1544-1555.