Package 'EchoNet2Fish'

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Title Estimate Fish Abundance from Acoustic Echoes and Net Catch

Version 0.0.0.9001

Description EchoNet2Fish estimates fish abundance from acoustic echoes and net catch.

Depends R (>= 3.2.1)

Suggests magrittr, testthat

License GPL

LazyData TRUE

URL https://github.com/JVAdams/EchoNet2Fish

NeedsCompilation no

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R topics documented:

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sliceCat	*Categorize Observations as Slices for Matching Acoustic Densities and Trawl Catches*

Description

Categorize observations as spatial slices for matching fish densities estimated from acoustic transects and speciec compositions estimated from midwater trawl catches.

Usage

```
sliceCat(sliceDef, fdp = NULL, bdp = NULL, lat = NULL)
```

Arguments

sliceDef   A list of at least two named sub-lists defining the slices into which observations
                    will be classified. Each sub-list contains one or more named numeric vectors of
                    length two, identifying the parameter (the name of the vector) and the range of
                    values that contribute to the slice definition. Each interval is closed on the left
                    and open on the right (see Details). The name of each sub-list is the name of the
                    slice to be assigned. See Examples.

fdp   A numeric vector of fishing depths (the distance from the surface of the water
                    to the depth of a fish in the water) corresponding to the observations which are
                    to be categorized into slices. Only necessary if required by sliceDef, default
                    NULL. default

bdp   A numeric vector of bottom depths (the distance from the surface of the water
                    to the substrate) corresponding to the observations which are to be categorized
                    into slices. Only necessary if required by sliceDef, default NULL.

lat   A numeric vector of latitudes corresponding to the observations which are to be
                    categorized into slices. Only necessary if required by sliceDef, default NULL.

Details

Each interval of sliceDef is closed on the left and open on the right. In other words, if you assign an
interval of fdp=c(10, 20), observations >= 10 and < 20 will be considered for inclusion in that slice.

All observation variables (fdp, bdp, lat) must be the same length.

Value

A character vector the same length as the observations variables (fdp, bdp, lat), identifying the
slice to which each observation belongs.

Examples

```
myslicedef <- list(
  epiNear = list( fdp=c(0,   4), bdp=c(0,   6) ),
  epiOff =  list( fdp=c(0,   4), bdp=c(6, Inf) ),
  hypo =    list( fdp=c(4, Inf) )
)
fishingD <- 1:7
bottomD <- c(2, 10, 4, 12, 6, 14, 8)
slice <- sliceCat(myslicedef, fdp=fishingD, bdp=bottomD)
data.frame(fishingD, bottomD, slice)
```

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