

Figure 4: Possible shapes for the detection function when cosine adjustments are included for half-normal and hazard-rate models.

Minke whale

First we fit a model to the minke whale data, setting the truncation at 1.5km and using the default options in `ds` very simply:

```
R> minke_hn <- ds(minke, truncation = 1.5)
```

Starting AIC adjustment term selection.

Fitting half-normal key function

Key only model: not constraining for monotonicity.

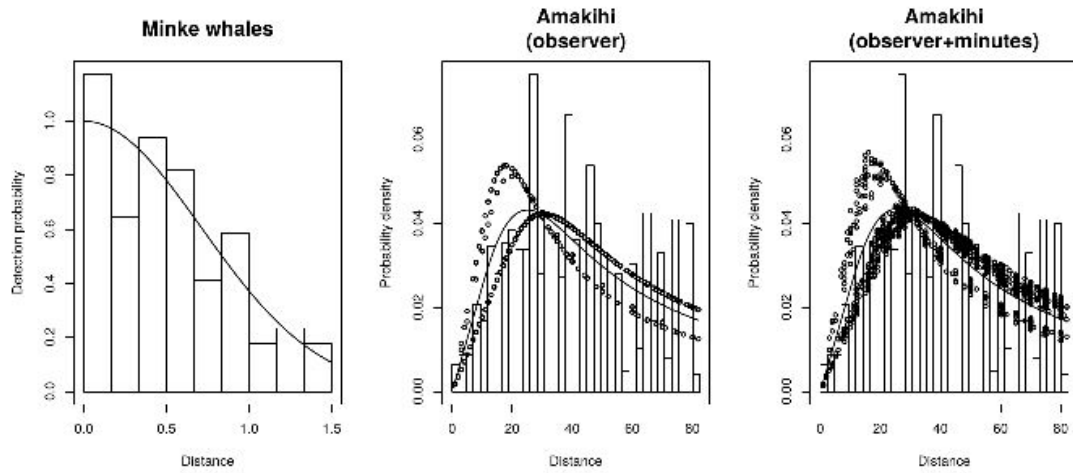


Figure 5: Left: fitted detection function overlaid on the histogram of observed distances for the minke whale data using half-normal model. Centre and right: plots of the probability density function for the amakihi models. Centre, hazard-rate with observer as a covariate; right, hazard-rate model with observer and minutes after sunrise as covariates. Points indicate probability of detection for a given observation (given that observation's covariate values) and lines indicate the average detection function.

