

3. Consider the beetle mortality example in Ch.7. First, produce a plot of the data (as per Fig. 7.3), but with the fitted probability versus dose curves from the three models superimposed. Is the better fit of the complementary log-log link evident?

Second, consider estimating the *median lethal dose* (LD-50), i.e., the dose of CS_2 (in units of $mg\,l^{-1}$) that yields expected mortality of 50%. Give both a point estimate and confidence interval based on each model. Do the three sets of point/interval estimates agree?

What about LD-5? Make some qualitative comments about your findings.

HINT: use what you know about estimating functions of parameters.

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