Name _____

# Mark-Recapture Data Sheet

Lincoln-Pearson Method (show equation in space on the right side of sheet):

**M =** _____

**n =** _____

**R =** _____

**N =** _____

Bailey's modification (show equation):

**$N_B$ =** _____

**SE =** _____ (see equation 6, p. 126 in Brower et al. 1998)

show equation here:

Calculate the 95% confidence intervals for $N_B$ (Bailey's modification). See equation 8, p. 126, Brower et al. 1998):

Name _____

# Removal Sampling Data Sheet

| | Run 1 | | Run 2 | | Run 3 | | Run 4 | | Run 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Number Caught | Cumlative Total | Number Caught | Cumlative Total | Number Caught | Cumlative Total | Number Caught | Cumlative Total | Number Caught | Cumlative Total |
| **Sample 1** | | | | | | | | | | |
| **Sample 2** | | | | | | | | | | |
| **Sample 3** | | | | | | | | | | |
| **Sample 4** | | | | | | | | | | |
| **Sample 5** | | | | | | | | | | |

## Hayne Extrapolation Method

For each of the runs, (1) hand graph the number caught by number previously caught and extrapolate N (estimated population size); (2) plot the cumulative number of insects by the number of insects per sample in MS Excel. Add a linear trendline (regression line) and put the equation on the graph (options tab in trendline window). Use the equation to determine N (the y intercept). Summarize your results below. Turn in your hand graphs and MS Excel graphs with this data sheet.

**Hand Graphing**

$N_{run\ 1}$ = _____

$N_{run\ 2}$ = _____

$N_{run\ 3}$ = _____

$N_{run\ 4}$ = _____

$N_{run\ 5}$ = _____

**Linear Regression**

$N_{run\ 1}$ = _____

$N_{run\ 2}$ = _____

$N_{run\ 3}$ = _____

$N_{run\ 4}$ = _____

$N_{run\ 5}$ = _____

## Moran-Zippin Method

Using the Moran-Zippin equation estimate the population and SE (standard error) for each of the five runs. Show calculations in the blank space to the left (use the back if needed).

$N_{run\ 1}$ = _____

$N_{run\ 2}$ = _____

$N_{run\ 3}$ = _____

$N_{run\ 4}$ = _____

$N_{run\ 5}$ = _____

$SE_{run\ 1}$ = _____

$SE_{run\ 2}$ = _____

$SE_{run\ 3}$ = _____

$SE_{run\ 4}$ = _____

$SE_{run\ 5}$ = _____