**data** PSN868;

input rep year $ block $ spp;

cards;

1 2007 1 1.6

1 2007 2 1.8

1 2008 1 2.2

1 2008 2 2.3

1 2008 3 1.5

1 2008 4 2

2 2007 1 1.6

2 2007 2 2

2 2008 1 2

2 2008 2 2

2 2008 3 2.2

2 2008 4 2

3 2007 1 2.3

3 2007 2 2.4

3 2008 1 2.3

3 2008 2 2.2

3 2008 3 2.3

3 2008 4 1.9

4 2007 1 1.9

4 2007 2 2.2

4 2008 1 2.3

4 2008 2 2.2

4 2008 3 2.3

4 2008 4 1.9

5 2007 1 2.8

5 2007 2 1.7

5 2008 1 2.2

5 2008 2 2.2

5 2008 3 2

5 2008 4 1.9

6 2007 1 2.2

6 2007 2 1.7

6 2008 1 2.1

6 2008 2 2.3

6 2008 3 1.8

6 2008 4 1.8

7 2007 1 2.6

7 2007 2 1.7

7 2008 1 2.5

7 2008 2 2

7 2008 3 2.4

7 2008 4 2.4

8 2007 1 2

8 2007 2 1.8

8 2008 1 2.2

8 2008 2 2.1

8 2008 3 2.2

8 2008 4 2.4

9 2007 1 2.1

9 2007 2 1.7

9 2008 1 2.3

9 2008 2 2.1

9 2008 3 2

9 2008 4 2.1

;

**proc** **glm**;

class block year;

model spp = block year;

means year /lsd snk;

Result

The GLM Procedure

| **Class Level Information** |
| --- |
| **Class** | **Levels** | **Values** |
| **block** | 4 | 1 2 3 4 |
| **year** | 2 | 2007 2008 |

|  |  |
| --- | --- |
| **Number of Observations Read** | 54 |
| **Number of Observations Used** | 54 |

The GLM Procedure

Dependent Variable: spp

| **Source** | **DF** | **Sum of Squares** | **Mean Square** | **F Value** | **Pr > F** |
| --- | --- | --- | --- | --- | --- |
| **Model** | 4 | 0.56203704 | 0.14050926 | 2.14 | 0.0900 |
| **Error** | 49 | 3.21888889 | 0.06569161 |   |   |
| **Corrected Total** | 53 | 3.78092593 |   |   |   |

| **R-Square** | **Coeff Var** | **Root MSE** | **spp Mean** |
| --- | --- | --- | --- |
| 0.148651 | 12.28075 | 0.256304 | 2.087037 |

| **Source** | **DF** | **Type I SS** | **Mean Square** | **F Value** | **Pr > F** |
| --- | --- | --- | --- | --- | --- |
| **block** | 3 | 0.24092593 | 0.08030864 | 1.22 | 0.3115 |
| **year** | 1 | 0.32111111 | 0.32111111 | 4.89 | 0.0317 |

| **Source** | **DF** | **Type III SS** | **Mean Square** | **F Value** | **Pr > F** |
| --- | --- | --- | --- | --- | --- |
| **block** | 3 | 0.38277778 | 0.12759259 | 1.94 | 0.1350 |
| **year** | 1 | 0.32111111 | 0.32111111 | 4.89 | 0.0317 |

t Tests (LSD) for spp

|  |  |
| --- | --- |
| Note: | This test controls the Type I comparisonwise error rate, not the experimentwise error rate. |

|  |  |
| --- | --- |
| **Alpha** | 0.05 |
| **Error Degrees of Freedom** | 49 |
| **Error Mean Square** | 0.065692 |
| **Critical Value of t** | 2.00958 |
| **Least Significant Difference** | 0.1487 |
| **Harmonic Mean of Cell Sizes** | 24 |

|  |  |
| --- | --- |
| Note: | Cell sizes are not equal. |

| **Means with the same letterare not significantly different.** |
| --- |
| **t Grouping** | **Mean** | **N** | **year** |
| A | 2.12778 | 36 | 2008 |
| A |   |   |   |
| A | 2.00556 | 18 | 2007 |