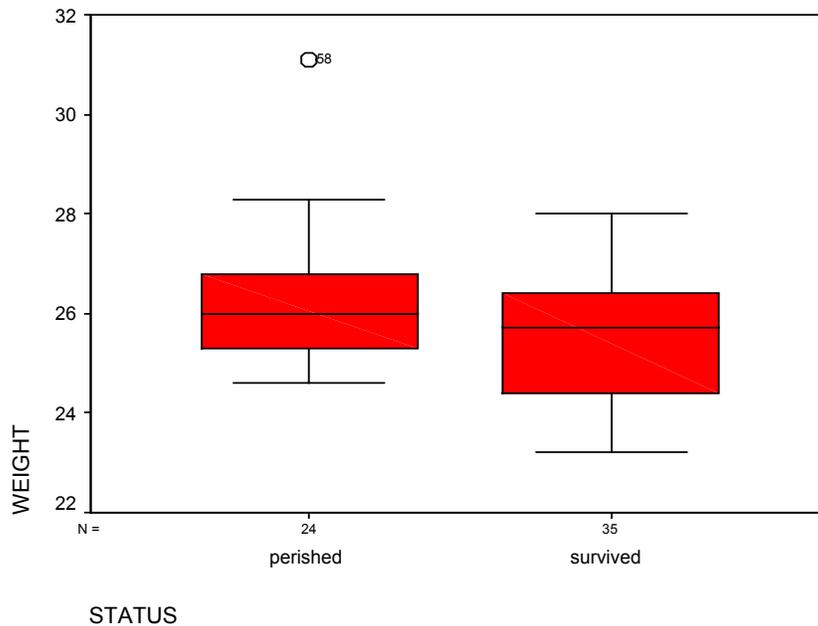


The question at issue is whether the distribution of weights of 35 male house sparrows that survived a severe winter storm differs from the distribution of weights of 24 sparrows that perished in the storm. Using side-by-side boxplots provides an intuitive assessment:



We see that, except for an outlier among the sparrows that perished, there is considerable overlap in weights between the sparrows that survived and those that died. However, the smallest sparrows seemed to have all survived the storm. A statistical test of whether the mean weight of sparrows in the two categories are equal or not indicates that there is a statistically significant difference with the mean weight of sparrows that survived being lower than that of those who perished ($t = -2.205$, 44.3 df approximately, $p\text{-value} = 0.033$, based on a two-sided t-test without pooling variances.) However, the significance of this result relies largely on the one outlier (a 31.1 gram sparrow that perished.) If the outlier is removed, the significance of the result diminishes ($t = -1.946$, 52 df approximately, $p\text{-value} = 0.057$, based on a two-sided t-test without pooling variances.) Since the data are observational, they only suggest that larger sparrows might be more likely to perish in a severe winter storm and we cannot conclude that weight itself is the cause of the increase chance of death.