[tex48] **Statistical uncertainty and information**

The number of bird species living on some continent is known to be 100. An ornithologist visits a small island off the coast of that continent to find out how many of the 100 bird species have migrated to the island.

One month after her arrival on the island she sends a first message to the Ornithological Society, stating that there exist only five of the 100 bird species on the island.

A month later she sends a second message stating that the relative abundance of the five bird populations identified previously is 80%, 10%, 5%, 3%, 2%.

Determine the numerical value of the information contained in each message.