

The Genetic Link between Spot Patterns of African Penguins

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The cause of variation in the skin patterns between individuals in a species is unknown. The extent to which genetic influences contribute to this variation was investigated by studying the spot pattern of African Penguins. Computer analysis was used on quantified spot patterns to compare similarities between related birds. Four methods of comparing skin patterns were developed which gave a correlation value between 0 and 1 depending on the similarity of the spot patterns. The average of this correlation value for related and unrelated birds was found and a statistical t-test performed on these two results. The difference in the averages was found to be significant for three of the four methods which proved there was a genetic link between the spot patterns of African Penguins.

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