

## Hyenas are as bright as primates, research shows

They were depicted as slobbering, slow-witted beasts by Disney in the hit movie *The Lion King*, but hyenas are far more intelligent than they have been given credit for.



Wild spotted hyenas, when presented with a steel puzzle box that contained food, used trial and error to work out how to open the door. Photo: EPA

By Richard Gray, Science Correspondent

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New research has revealed the African carnivores are adept at solving problems and can even “count”. Scientists now believe the animals may have intelligence levels that match some primates.

The animals, which are highly social, have been found to assess the size of a competing pack which is invading their territory, by listening to their calls. They will only confront the intruders if the “count” shows they have a numerical advantage.

And wild spotted hyenas, when presented with a steel puzzle box that contained food, used trial and error to work out how to open the door.

Dr Sarah Benson-Amram, of the University of St Andrews, said: “Hyenas do have a reputation for being dim-witted scavengers.

“Hyenas are in fact innovative and able to solve new technical problems. Additionally, spotted hyenas are also quite adept at solving social problems, and have demonstrated cognitive abilities on par with those of some primates.”

In a study published in the scientific journal *Proceedings of the Royal Society B*, Dr Benson-Amram showed that spotted hyenas experimented with different strategies to open a closed box. As they were wild animals, they had never encountered a box like it before.

Some of the hyenas tried just a few methods to open the puzzle box while others used many, including biting, flipping it over, digging underneath it and pushing it around.

Those that tried a diverse range of techniques tended to be more successful and once they had opened the box once, they were able to open it again more quickly.

Such mental agility was once thought to be the preserve of primates, including humans, but scientists are increasingly discovering that animals including crows, pigeons, octopus, dogs and even sheep can solve problems.

Dr Benson-Amram added: “The hyenas learned to solve the problem using trial-and-error. The vast majority of animals, including humans, rely upon this when dealing with new challenges.

“We found that successful hyenas got much faster at solving the problem over time. Eventually they learned the solution such that they would run up to the puzzle box and open it within seconds.

“We found that some hyenas were more 'creative' than others, in that some individuals try more potential solutions when attempting to open the puzzle box.

"We saw some indications that wild hyenas were also learning about the problem by observing others solve it.

“One hyena, however, that could not figure out how to open the puzzle, learned he could position himself near the door so that when another hyena solved the puzzle he could get to the meat faster and eat it all.”

