Conservationists' dilemma as threatened jaguar develops taste for endangered turtle

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(Phys.org) -- How do you protect two species facing extinction when one begins to prey heavily on the other?

That's the dilemma facing conservationists in Costa Rica who have recently discovered that their highly threatened jaguar population is increasingly dining on endangered marine turtle species.

Tortuguero National Park is a vital haven for both species, being home to an unknown number of jaguars and the world's largest green turtle population (besides hawksbills and leatherbacks). The park is an important nesting ground for the turtles and therefore globally vital for producing future generations of the species.

Jaguar kills can account for a total of 676 marine turtle deaths between 2005 (when researchers started recording the killings) and 2010. All were green turtles with the exception of three hawksbills and one leatherback turtle. The researchers say this predation of adult turtles 'has now reached a magnitude never before recorded.'

Jaguars have been photographed feeding on green turtles and jaguar kills are typically marked by a single bite to the neck. Conservationists say they urgently need to understand how many jaguars are in the park and how much they are relying on these turtles as a source of food.

With both jaguars and turtles being flagship conservation species, what action can conservationists take? All marine turtle species occurring

around the American continent are threatened with extinction, with the green turtle classified as endangered and the leatherback and hawksbill turtles as critically endangered. Jaguar populations in Costa Rica are also considered to be highly threatened. Large-scale projects such as Operation Green Turtle and 'Paseo Pantera' ('path of the panther') have been developed to conserve the animals.

Diogo Verissimo, researcher with the Durrell Institute of Ecology and Conservation and Global Vision International, which is involved in conservation of marine turtles in the Tortuguero area, brought the problem to light in the research paper, titled 'Jaguar Panthera onca predation of marine turtles: conflict between flagship species in Tortuguero, Costa Rica', published in Oryx - The International Journal of Conservation published for Fauna & Flora International by Cambridge University Press. He admitted that this issue has got conservationists scratching their heads, and sometimes falling out, as the issue has implications, not just for how to manage the problem itself, but for the high profile and emotive arena of 'conservation marketing'.

"It's a major problem when one endangered species begins preying heavily on another. The hunter cannot just be culled because it is itself threatened and it is extremely difficult to know what to do to protect the hunted. Already this issue has caused disagreement between conservationists, who are increasingly dealing with conflicts between the management of different species and facing extremely challenging decisions, particularly when the animals involved have a high media profile and are both the subjects of campaigns to protect them!"

Verissimo and his colleagues say that, where problems such as the turtle-jaguar dilemma occur, the cooperation between the champions of each species needs to be stepped up along with better management of the relationships between local communities, conservation organisations and foreign donors.

"Only by working together and acknowledging that this complex problem will not have an easy solution can we move towards some kind of resolution and even then, some hard decisions may have to be taken."

More information: Read the full paper: Jaguar Panthera onca predation of marine turtles: conflict between flagship species in Tortuguero, Costa Rica

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