

# Zoology article from nyt

[Science](#), [Biology](#)



Zoology article from NYT In the article Best Case Scenario: Two Chances to Mate, Sindya Bhandoo focuses on the mating behaviour of male orb-web spiders that revealed an interesting pattern in their mating patterns. Apparently, they can mate with a second female in case she is a virgin and heavy. Using the *Argiope bruennichi* species, the study found that 80% of the times, the females were successful in eating their mates after the initial copulation (Bhanoo). During the mating process, the pedipalp that transfers the sperm from the male is broken off while in the female to form a plug. Consequently, this prevents any subsequent fertilization of eggs by other males. The male has two pedipalps, thus can mate twice in their life. If the male does mate with a virgin, he secures all 100% paternity of all their eggs. However, if the female is not a virgin, the spider's chance at paternity decreases by ninety percent. Additionally, the males can only mate early in the day with the same female. Later on in the day, the male spider seeks to mate with a second spider. This is a compare and contrast paper between a zoology related article from the New York Times and an original scientific article by the scientist Sindya Bhanoo.

In the scientific article, Conditional monogyny: female quality predicts male faithfulness, Bhandoo and his colleagues found that this palp removal reduced the weight of the male orb-web spider, and thus, increasing its stamina significantly. This, in turn, enhances the spider's endurance capacity. Therefore, despite the Bhandoo not pointing out this fact in the article, the palp losing mechanism, also known as the gloves-off hypothesis, increases the eunuch's fighting abilities. After losing their palp, the spiders, became more mobile and agile since the palps were of disproportionately

high total weight of the body. They represent 10% of their total body weight (Bhanoo et al 7).

Additionally, the study expounds on the fact that the male spider makes state-dependent decisions when deciding on their mating partner. They make this decision based on her mating status, adult weight, age, local availability of competing mating partners, as well as the time of day. Another fact that the scientific paper expounded on was the impact that the size of the spider has on its reproductive tactics, as well as its ability to compete with others for female mating partners. Expression of territorial males and sneakers was determined by the size of the male, which the article did not cover. The number of legs that the male spider had left was directly related to OSR changes in the mating season (Bhanoo 7). Towards the end of the mating season, males were found to most likely have all their legs intact as the OSR became biased towards females.

In Conditional monogyny: female quality predicts male faithfulness; the authors also deal with the influence of female weight in the preference of male spiders when mating, which was not covered in the NYT article. Weight acts as a positive predictor of female fecundity, consequently impacting on the success of the male reproduction (Bhanoo 8). In the study, it was found that males who mated with heavy females first most likely followed this up with a monogynous mating tactic, rather than a bigynous one. Bigynous males, however, compensate for this by selecting heavier females as their subsequent mating partners. Some, in fact, first secure an insemination success without regards to the quality of the female then move on to look for a second partner of higher quality.

## Works Cited

Bhanoo, Sindya. Best-Case Scenario: Two Chances to Mate. 30 April 2012 .

Web 21 October 2012.

[www.nytimes.com/2012/05/01/science/how-male-orb-web-spiders-who-can-mate-at-most-twice-choose](http://www.nytimes.com/2012/05/01/science/how-male-orb-web-spiders-who-can-mate-at-most-twice-choose).

Bhanoo, Sindya. Welke, Klaas. Zimmer, Stefanie. & Schneider, Jutta. "

Conditional Monogyny: Female Quality Predicts." *Frontiers in Zoology* (2012): 1-10. Print.