

#### ORIGINAL VERSION

### PARAPHRASED VERSION

"This study examines whether workers of S. invicta are able to assist their mothers in colony usurpations. First we tested whether [queens] of S. invicta are better able to usurp colonies to which their daughters have moved. Second, we tested whether the effect of daughters on usurpation success is due to familiarity with the queen or to genetic relatedness. Aggressive behavior during these usurpation attempts was observed to determine if the presence of familiar or related workers influenced the aggressive response toward either the resident queen or the queen attempting usurpation."

A study was conducted to examine whether workers of S. invicta can assist their mothers in colony usurpations. The first hypothesis tested was whether queens of S. invicta are better able to usurp colonies to which their daughters have moved. For the second hypothesis, the researchers tested whether the effect of daughters on usurpation success is due to familiarity with the queen or to genetic relatedness. The researchers observed aggressive behavior during these usurpation attempts to determine if the presence of familiar or related workers influenced the aggressive response toward either the resident queen or the queen attempting usurpation.

- \* Red colored, underlined strings of text indicate that they have been taken verbatim from the original paragraph.
- \* Blue highlighted text indicates that it has been appropriated from the original paragraph with a change in the order of the words or phrases.

FEEDBACK: This rewritten version is definitely plagiarized. The author has merely added or substituted a few words at the beginning of each sentence, and copied verbatim the remainder of the sentences. Notice that although none of the sentences in the rewritten paragraph are identical to their counterparts in the original, the rewritten version is still deemed as an instance of plagiarism because the author has simply appropriated too many phrases from the original. Thus, the attempted paraphrase falls way short of the requirement for the original text to be thoroughly modified. This is a clear-cut case of plagiarism.



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An investigation was carried out to <u>examine whether</u> workers of *S. invicta* can <u>assist their mothers in colony usurpations</u>. The first hypothesis tested was <u>whether queens</u> of *S. invicta* are better able to usurp colonies to which their <u>daughters have moved</u>. The second hypothesis <u>tested</u> whether the effect of daughters on usurpation success is due to familiarity with the queen or to genetic relatedness.

Aggressiveness <u>during these usurpation attempts was</u> mesured to determine if the presence of familiar or related workers influenced the aggressive response toward either the resident queen or the queen attempting usurpation

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FEEDBACK: The author has not truly paraphrased the original paragraph. As with the first rewritten version, only a few words have been substituted, deleted, or added, leaving the rest of the sentences in the new paragraph virtually unchanged. Once again, too many of the phrases that make up the original paragraph are reproduced in the rewritten version. The author has simply failed to modify the original material sufficiently. For these reasons, the current rewritten version is considered an instance of definite plagiarism.



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To determine whether workers of *S. invicta* can assist their mothers in colony usurpations, two researchers have conducted a study in which the following hypotheses were tested: First, they wanted to see whether queens of *S. invicta* are better able to usurp colonies to which their daughters have moved. Second, they tested whether the effect of daughters on usurpation success is due to familiarity with the queen or to genetic relatedness. The ants' aggressive behavior during these usurpation attempts was observed to determine if the presence of related or familiar workers influenced the aggressive response toward either the resident queen or the queen attempting a colony take-over.

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FEEDBACK: The first sentence of the rewritten version is probably an acceptable paraphrase of the first sentence in the original paragraph. However, with the exception of a minor transposition of words in the last sentence, the rest of the sentences have only been superficially changed by the addition or substitution of a few words at the beginning of each sentence. The remaining phrases in these sentences have not changed. As with the previous example, none of the sentences in the rewritten paragraph are totally identical to their counterparts in the original. Because there is still a significant amount of verbatim material taken from the original, the rewritten version would still be deemed as an example of plagiarism.



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To determine whether workers of *S. invicta* can assist their mothers in colony usurpations, a study was conducted in which the following variables were investigated: First, *S. invicta* queens' hypothesized ability to usurp colonies to which their daughters have moved was examined. The second hypothesis tested whether the effect of daughters on usurpation success is due to familiarity with the queen or to genetic relatedness. During these usurpation attempts aggressive behavior was observed to determine if the presence of familiar or related workers influenced aggression toward either the resident queen or the queen attempting colony usurpation.

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FEEDBACK: In this version the first two paraphrased sentences appear to have undergone moderate modifications. However, the second two sentences have not been adequately paraphrased. As with previous versions, the third sentence was changed by a mere substitution of the first two of three words and the fourth sentence has not been changed at all making these two sentences plagiarized versions of the original. Because the first two sentences were not sufficiently modified and because the last two sentences contain only minimal changes, this rewritten version of the original paragraph is still considered as a case of plagiarism.



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An investigation was carried out to determine whether S. invicta mothers are helped by their worker offspring during colony usurpations. The study's focus of investigation was the question of whether colony take-over by S. invicta queens is more effective when their daughters first invade the colonies. One hypothesis concerned the extent to which daughters' familiarity with the queen, or their genetic similarity to her, affects successful colony take-over. During attempts at taking over another colony, behavioral observations were made of usurping workers that were either familiar or genetically related to the queens to see if these variables were related to aggressive behavior toward the resident or the invading queen.

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FEEDBACK: Although some of the terms from the original paragraph have been retained in the rewritten version, the current paraphrased version has been sufficiently modified from the original and is, therefore, classified as having been correctly paraphrased.



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Balas and Adams carried out an investigation to determine whether S. invicta mothers are helped by their worker offspring during colony take-overs. These authors asked whether colony take-over by S. invicta queens is more effective when their daughters first invade the colonies. A second hypothesis concerned the extent to which daughters' familiarity with the queen, or their genetic similarity to her, affects successful colony take-over. During these occupation attempts, aggressive behavior of usurping workers that were either familiar or genetically related was observed to see if these variables mediated aggressive behavior toward the invading or the resident queen.

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FEEDBACK: If you selected "properly paraphrased", you are correct. Although as in the earlier example (No. 5) the structure of the paragraph (i.e., order of the sentences) has been preserved, the present rewritten paragraph represents a thoroughly modified version of the original. The reader is reminded, however, that in some disciplines, particularly within the humanities, a proper paraphrase entails a change in the overall structure of the paragraph as well as a change in the wording. Given, that scientific writing is sometimes multidisciplinary in scope, authors should make every effort to be thoroughly acquainted with the rules of scholarship encompassing the readership of their work.