

Paraphrasing Exercise—Version 1

Original paragraph:

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.

[Balas, M. T, & Adams, E. S. (1997). Intraspecific usurpation of incipient fire ant colonies. *Behavioral Ecology*, 8(1), 99–103.]

Rewritten paragraph 1:

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.

From *Avoiding Plagiarism, Self-Plagiarism, and Other Questionable Writing Practices: A Guide to Ethical Writing*, (p. 52), by M. Roig, [n.d.], U.S. Department of Health and Human Services, Office of Research Integrity (USDHHS, ORI). Adapted by SEDL with permission of author Miguel Roig and in compliance with the USDHHS, ORI policy of providing material free of charge for educational purposes. Available from <http://ori.hhs.gov/avoiding-plagiarism-self-plagiarism-and-other-questionable-writing-practices-guide-ethical-writing>

Paraphrasing Exercise—Version 2

Original paragraph:

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.

[Balas, M. T, & Adams, E. S. (1997). Intraspecific usurpation of incipient fire ant colonies. *Behavioral Ecology*, 8(1), 99–103.]

Rewritten paragraph 2:

An investigation was carried out 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. The second hypothesis tested whether the effect of daughters on usurpation success is due to familiarity with the queen or to genetic relatedness. Aggressiveness during these usurpation attempts was measured to determine if the presence of familiar or related workers influenced the aggressive response toward either the resident queen or the queen attempting usurpation.

From *Avoiding Plagiarism, Self-Plagiarism, and Other Questionable Writing Practices: A Guide to Ethical Writing*, (p. 54), by M. Roig, [n.d.], U.S. Department of Health and Human Services, Office of Research Integrity (USDHHS, ORI). Adapted by SEDL with permission of author Miguel Roig and in compliance with the USDHHS, ORI policy of providing material free of charge for educational purposes. Available from <http://ori.hhs.gov/avoiding-plagiarism-self-plagiarism-and-other-questionable-writing-practices-guide-ethical-writing>

Paraphrasing Exercise—Version 3

Original paragraph:

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.

[Balas, M. T, & Adams, E. S. (1997). Intraspecific usurpation of incipient fire ant colonies. *Behavioral Ecology*, 8(1), 99–103.]

Rewritten paragraph 3:

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.

From *Avoiding Plagiarism, Self-Plagiarism, and Other Questionable Writing Practices: A Guide to Ethical Writing*, (p. 56), by M. Roig, [n.d.], U.S. Department of Health and Human Services, Office of Research Integrity (USDHHS, ORI). Adapted by SEDL with permission of author Miguel Roig and in compliance with the USDHHS, ORI policy of providing material free of charge for educational purposes. Available from <http://ori.hhs.gov/avoiding-plagiarism-self-plagiarism-and-other-questionable-writing-practices-guide-ethical-writing>

Paraphrasing Exercise—Version 4

Original paragraph:

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.

[Balas, M. T, & Adams, E. S. (1997). Intraspecific usurpation of incipient fire ant colonies. *Behavioral Ecology*, 8(1), 99–103.]

Rewritten paragraph 4:

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.

From *Avoiding Plagiarism, Self-Plagiarism, and Other Questionable Writing Practices: A Guide to Ethical Writing*, (p. 58), by M. Roig, [n.d.], U.S. Department of Health and Human Services, Office of Research Integrity (USDHHS, ORI). Adapted by SEDL with permission of author Miguel Roig and in compliance with the USDHHS, ORI policy of providing material free of charge for educational purposes. Available from <http://ori.hhs.gov/avoiding-plagiarism-self-plagiarism-and-other-questionable-writing-practices-guide-ethical-writing>

Paraphrasing Exercise—Version 5

Original paragraph:

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.

[Balas, M. T, & Adams, E. S. (1997). Intraspecific usurpation of incipient fire ant colonies. *Behavioral Ecology*, 8(1), 99–103.]

Rewritten paragraph 5:

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.

From *Avoiding Plagiarism, Self-Plagiarism, and Other Questionable Writing Practices: A Guide to Ethical Writing*, (p. 60), by M. Roig, [n.d.], U.S. Department of Health and Human Services, Office of Research Integrity (USDHHS, ORI). Adapted by SEDL with permission of author Miguel Roig and in compliance with the USDHHS, ORI policy of providing material free of charge for educational purposes. Available from <http://ori.hhs.gov/avoiding-plagiarism-self-plagiarism-and-other-questionable-writing-practices-guide-ethical-writing>

Paraphrasing Exercise—Version 6

Original paragraph:

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.

[Balas, M. T. & Adams, E. S. (1997). Intraspecific usurpation of incipient fire ant colonies. *Behavioral Ecology*, 8(1), 99–103.]

Rewritten paragraph 6:

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.

From *Avoiding Plagiarism, Self-Plagiarism, and Other Questionable Writing Practices: A Guide to Ethical Writing*, (p. 62), by M. Roig, [n.d.], U.S. Department of Health and Human Services, Office of Research Integrity (USDHHS, ORI). Adapted by SEDL with permission of author Miguel Roig and in compliance with the USDHHS, ORI policy of providing material free of charge for educational purposes. Available from <http://ori.hhs.gov/avoiding-plagiarism-self-plagiarism-and-other-questionable-writing-practices-guide-ethical-writing>