

Research paper on wasps do not build their nests in the open sky

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



Scientific Method

Introduction:

Current research shows that wasps make their nests in shelters (Kraucunas & Johnson, 2002). These wasps additionally make their nests from various materials like paper and mud which contain varied number of cells. Paper wasps arguably are said to make large communal nests of Paper material from masticated and chewed bits and pieces of wood which are also debated to accommodate large colony of wasps. In addition, potter wasps make their nests out of mud and in most cases live alone in those nests. In addition, it is also evident and known that wasps actually build their nests under roofs of buildings, leaves and under shelter of rocks (O'Neill, 2001). Additionally, O'Neill argues that those wasps which build their nests in the open always cover their nests with a “ varnish” of a water-proof “ plant gum”. It is also important to note that current studies debate that wasps do not build their wasps in the open sky (Kraucunas & Johnson, 2002).

Hypothesis:

It is known and believed that wasps do not build their nests in the open sky exposed to the sun and rain hence a blue painting on the farmer's porch placed in the house actually deters wasps from building their nests.

Prediction:

If the hypothesis and belief that wasps do not build their nests on the sky is true, then the blue ceiling will actually deter wasps from building their nests under the eaves of the porch or along the ceiling.

Controlled Experimental Method:

Requirements:

- _Blue paint
- _6 Farmer's porches
- _Painting brush
- _60 wasps, 10 enclosed in one experiment room and 10 in the control room experiment
- _6 rooms with ceiling labeled A-F
- _molten paper material or wood particles
- _Meat and blended fruits
- _Water

Procedure:

Six similar rooms both having similar ceilings without the blue paint were first isolated. Thereafter, one farmer's porch was inserted in each of the rooms after which, two of the ceilings of the six porches were painted blue and the other four were left without any painting. The ones painted blue were the test samples while the ones left acted like the control. Six similar amounts of molten paper and wood particles were placed in each of the rooms while ensuring that the pressure, temperature and humidity conditions of the six rooms were kept constant. Equal pieces of meat were consequently placed in each of the six rooms after which ten wasps were released to each of the rooms. All spaces and openings were closed but allowing ventilation through meshed spaces. These rooms were left for 3 weeks but were opened every week to count the number of nests built by

the wasps under the eaves of the porches and ceilings counted. The number of nests in the four test rooms and porches were summed up together and an average calculated; which was the actual number of nests built by the wasps. Also the average number of nests in the control experiments was also calculated. A table was finally plotted showing the number of nests built and the room numbers.

Results:

The table below shows the results that were obtained from the experiment:

Room Number

- A
- B
- C
- D
- E
- F

Painting on the ceiling of the porch

- No
- No
- Yes
- Yes
- Yes
- Yes

Number of Nests Formed Under the porch and ceiling

After the first week

- 0
- 0
- 5
- 5
- 4
- 6

After the second week

- 0
- 0
- 3
- 5
- 5
- 5

After the third week

- 0
- 0
- 3
- 4
- 4
- 4

Calculation:

The average number of nests formed in the experimental porches =

$$[5+5+4+6] + [3+5+5+5] + [3+4+4+4]$$

4

4

4

$$= 5+5+4 = 5 \text{ nests.}$$

3

The average number of nests formed in control porches= 1

Conclusion:

I accept and agree with the hypothesis that a blue painting on the ceiling actually deters wasps from building nests on the porch. This is based on the results obtained from the experiment conducted; an average of five nests was found to be built by the wasps every week. On the other hand, the control experiments showed that no nest was really built by the wasps on the two control porches. It can therefore be deduced that, blue painting actually deters and discourages wasps from building nests on the ceiling.

This deductive argument is also in close relation with the argument made by Burtonr and Burtonm (2002). They debate that, wasps actually build their nests in places where there is shelter to protect their colonies from the harmful effects of rain and the sun. Wasps also can be said to build their nests in houses and other shelters to protect their colonies from predators

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and other enemies that may bring disturbance to them (Hansel, 1984).

Finally, apart from wasps building their nests in ceilings and roofs of houses; some also burrow in the soil and build long shaped tubular-like nests out of clay and mud hence referred to as Mud Daubers (Triefeldt, 2008).

References

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